BASIC SHEETS – BACKGROUND INFORMATION

This Section of the EIS, called the “Basic Sheets”, contains background information, summaries of impacts, and other information pertinent to the environmental impact studies. It discusses the purpose and need for a project and describes all the alternatives that were studied.

A. BACKGROUND INFORMATION

1. Geographical Setting

The study area for this Environmental Impact Statement is located in south central Wisconsin. The study area encompasses portions of the southern half of Jefferson County and the northern quarter of Rock County. See Figure 1 on page 4. The area is situated roughly half-way between the two major cities of southern Wisconsin, Madison and Milwaukee.

Landscape

In Jefferson County, the study area includes the incorporated city of Fort Atkinson and the surrounding Township of Koshkonong. Within Rock County, the study area includes the northern portions of the Townships of Lima and Milton.

Outside of the urban landscape of Fort Atkinson (population 11,621), the area is dominated by agricultural uses and open space/wetland natural areas. Many land and water resources are present in the study area including the Rock River and its tributaries, streams, a large wetland complex, Lake Koshkonong, tilled agricultural lands, and dairy farms.

Elevations in the study area range between approximately 750 and 1,000 feet above sea level. The topography is typical of a glaciated region with the hilly drumlins interspersed with low lying wetland areas.

Climate

The area's average annual temperature is 46 degrees F with an average annual rainfall of 34.11 inches.

Geology and Hydrology

The predominantly sandstone bedrock is overlain by glacial drift in most of the study area. Water supplies are from groundwater. For the most part the water table lies within the glacial drift where groundwater recharge occurs. The source of all groundwater is from precipitation. Well yields differ widely throughout the area.

The study area region is known to contain Karst topography. Karst refers to areas where sinkholes, shallow soils, or sinking streams or springs occur. A Karst-related sinkhole usually indicates an area of weakness in bedrock stability. Sinkholes can occur in clusters or as isolated features and are often found at the intersection of weathered bedrock joints (enlarged bedrock fractures). Some sinkholes are connected to an intricate subsurface drainage network or cave system.

Karst conditions make it easier for groundwater to become contaminated. In areas where Karst occurs, underwater streams and springs can be impacted by contaminants such as pesticides, animal waste, or roadway runoff. While linear projects such as roadway construction have minimal impact on the recharge region of most springs, exposure of these springs to contaminants such as roadway runoff or construction sediment has the potential to impact groundwater supplies. In many instances, the risk of contaminating groundwater in Karst areas is reduced if rock cutting or blasting is avoided.

Additional detailed information about the various affected resources can be found on the Factor Sheets beginning on page 71.

2. Description of Proposed Action

The Wisconsin Department of Transportation (WisDOT) proposes to improve the regional mobility of the US 12 highway system in the Fort Atkinson area from the US 12 Bypass of Whitewater to the North Fort Atkinson US12/WIS26 interchange. See Figure 1 on page 4 for a map of the study area. Several alternative improvements of a broad range of type and intensity were proposed to improve the regional mobility of the US 12 highway system in the Fort Atkinson area. See the alternatives in Figure 2 on page 5. Potential improvements ranged from doing nothing to improving the existing alignment to building a new bypass of Fort Atkinson, to rerouting US 12 to another highway. WisDOT developed alternatives in consultation with the public, a locally appointed Advisory Committee [2] and cooperating and interested agencies. Each alternative is fully described in Item 4 on page 23.

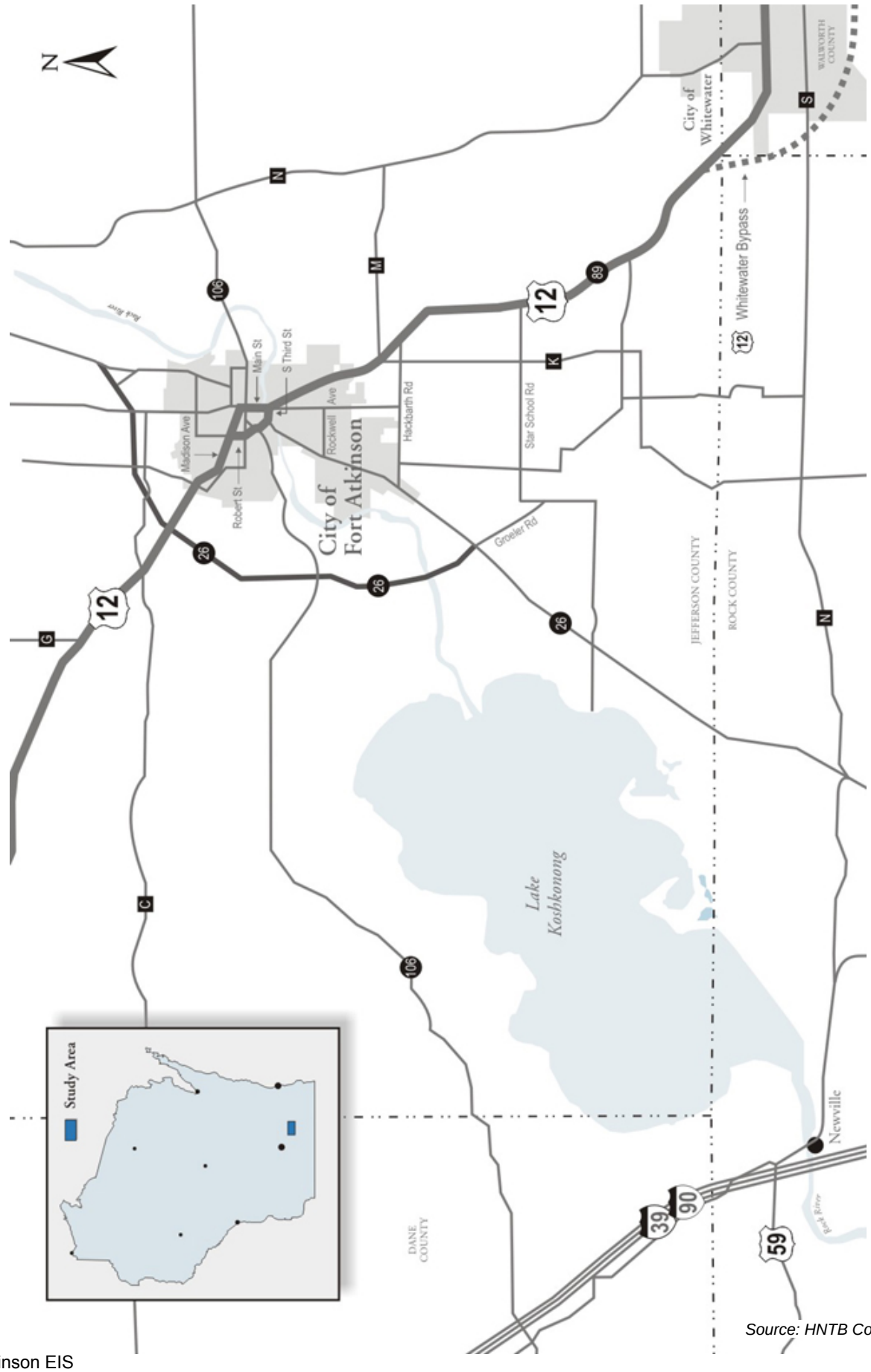
US 12 is designated a Corridors 2020 Connector route in the State's highway plans. The connector routes are a system of two-and four-lane highways that connect key communities and regional economic centers to the Corridors 2020 Backbone routes. The backbone routes are key multi-lane routes that connect major population and economic centers and provide economic links to national and international markets e.g. the interstate highways. The system is to carry high volumes of auto and heavy truck traffic. The existing typical section for Main Street in Fort Atkinson is contained in Figure 3 on page 6. Fort Atkinson's Robert Street can be seen in Figure 4 on page 7.

WisDOT examined the broad range of alternatives and selected six for detailed study in this DEIS. See Figure 5 on page 8 for a map of the alternatives selected for further study. Item 4 on page 23 describes fully the various alternatives.

A preferred alternative has not yet been selected by WisDOT. This Draft Environmental Impact Statement (DEIS) provides a comparative assessment of the alternatives to assist decision-makers in selecting a preferred alternative. A preferred alternative will be presented in the Final EIS (FEIS) after public comment and testimony is weighed.

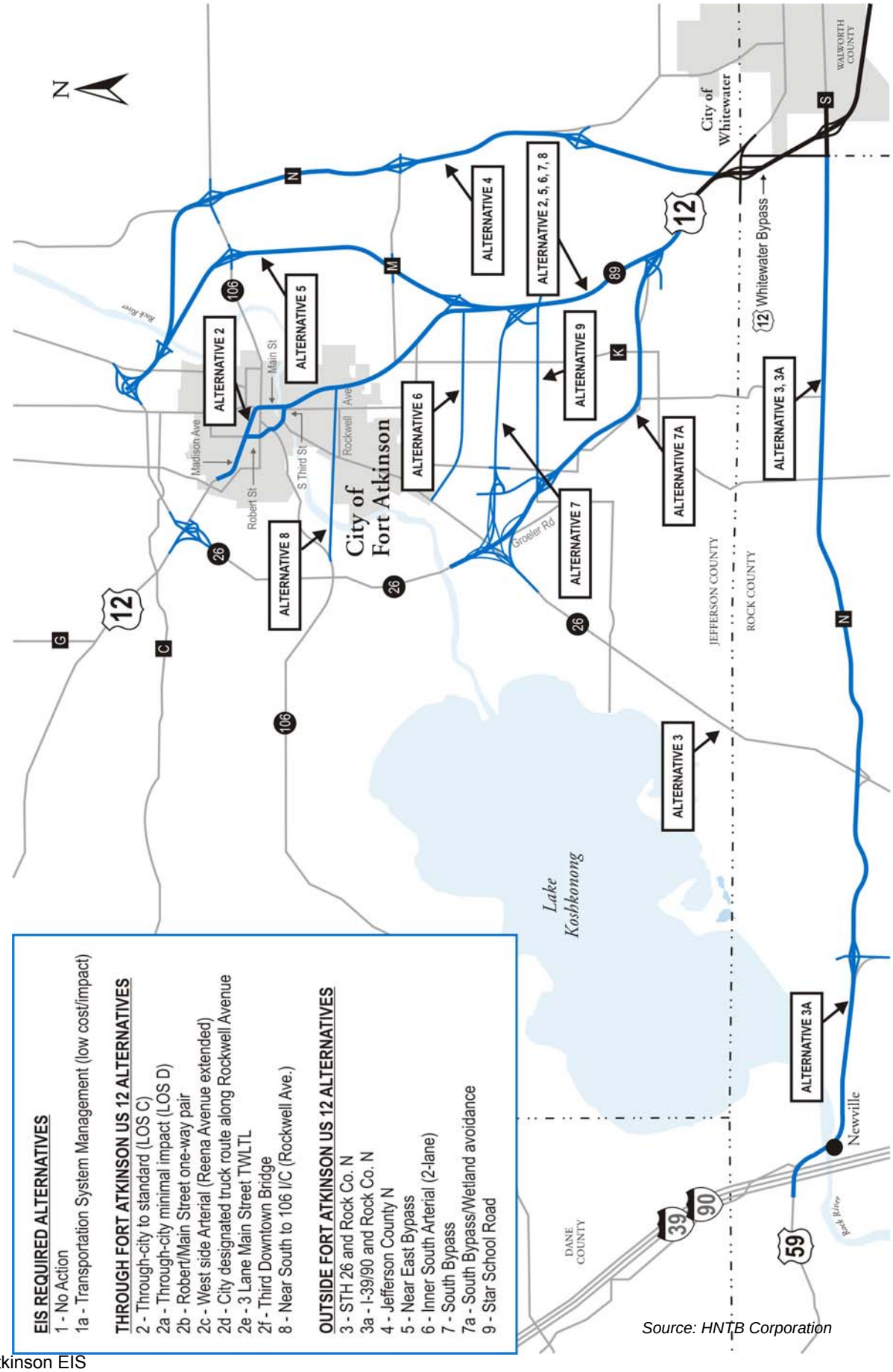
---

[2] The Advisory Committee members are presented on page 3.



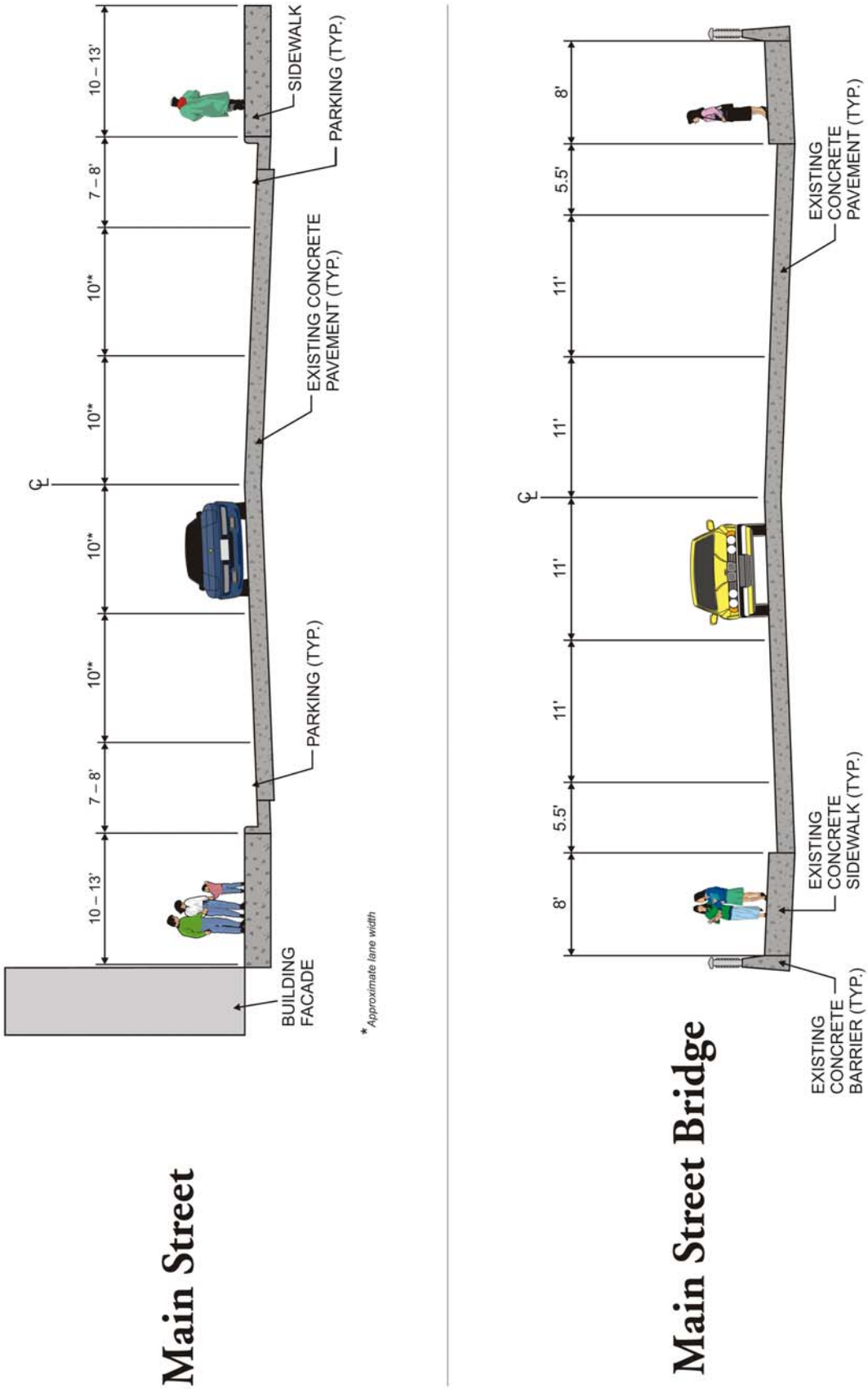
Source: HNTB Corporation

Figure 1: Study Area



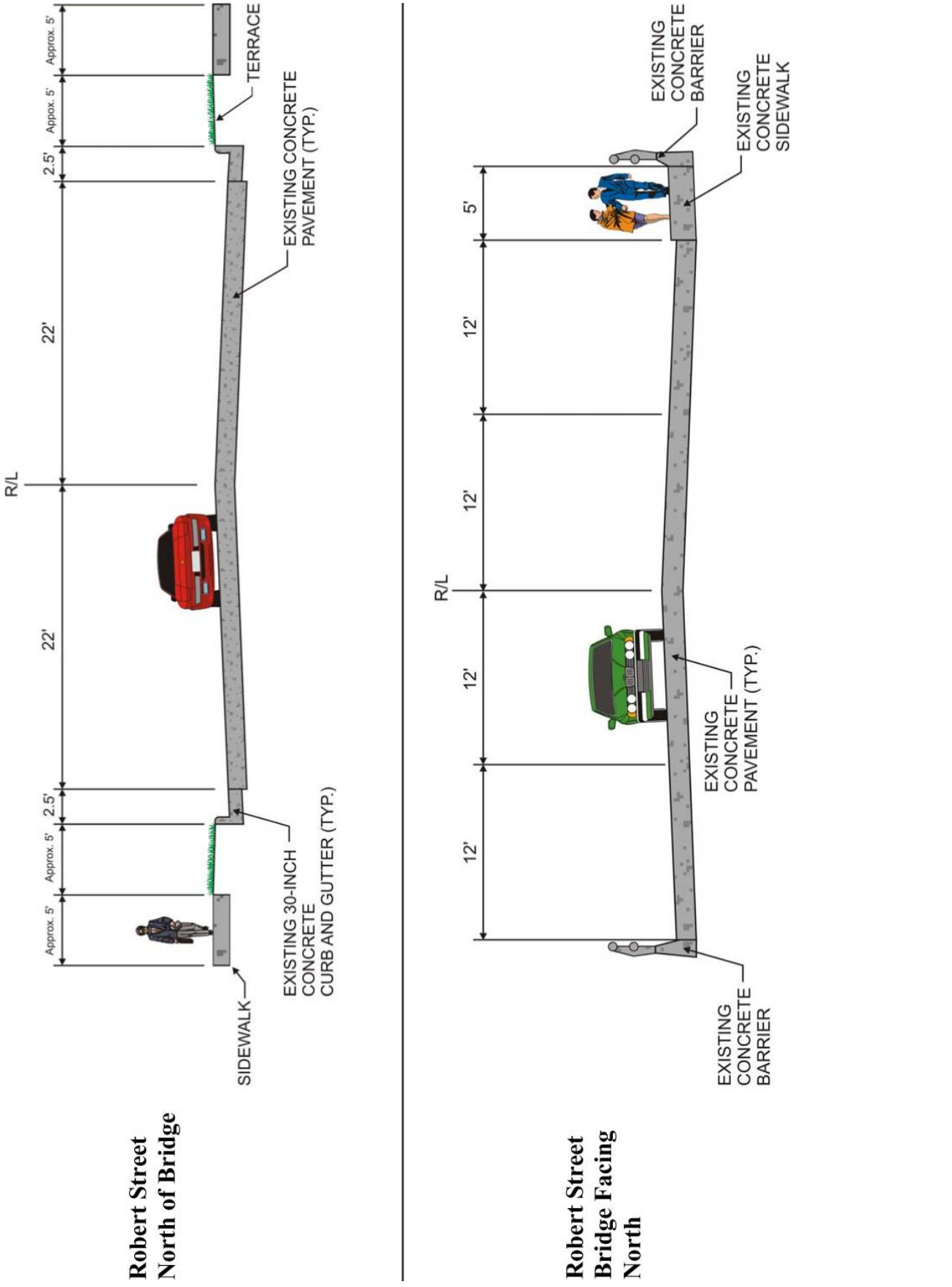
Source: HNTB Corporation

Figure 2: Broad Range of Alternatives



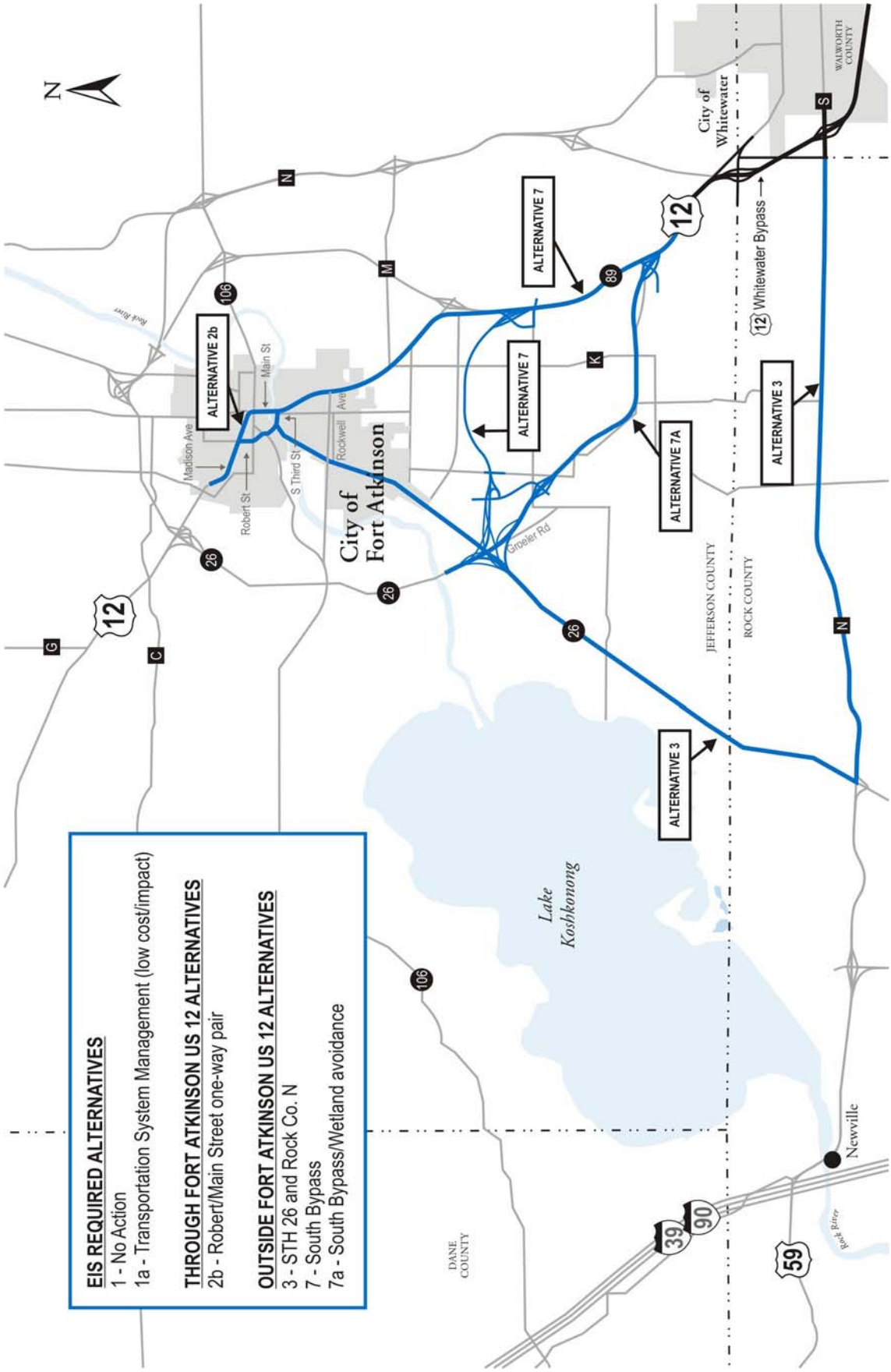
Source: HNTB Corporation

Figure 3: Main Street Existing Typical Sections



Source: HNTB Corporation

Figure 4: Robert Street Existing Typical Sections



Source: HNTB Corporation

Figure 5: Alternatives Retained for Detailed Study

3. Purpose and Need of Proposed Action

Include description of existing facilities, abutting facilities, and how the action links into the overall transportation system. When appropriate, show that commitment for future work is not being made without evaluation, and that viable alternatives in a larger framework are not being unduly foreclosed.

Current Role of US 12

US Highway 12 is a part of the National Highway System (NHS) that stretches across much of the continent. In this respect, its function is of state and national concern. The purpose of the NHS is to serve major population centers, international border crossings, ports, airports, public transportation facilities, and other intermodal transportation facilities and destinations and to serve interstate and interregional travel. The NHS is expected to carry 40% of the nation's highway traffic, 75% of heavy truck traffic, and 80% of tourist traffic.

US 12 extends from Aberdeen, Washington to Detroit, Michigan, passing through ten states. The highway is of regional importance and makes needed interconnections to the interstate highway system. US 12, enters the State of Wisconsin from the west via Minneapolis – St. Paul, Minnesota at Hudson Wisconsin. As it proceeds east, it passes Wisconsin Dells, Baraboo, Sauk City, Middleton, Madison, Cambridge, Fort Atkinson and Whitewater. It continues on through Wisconsin, leaving the state at the southeast corner of Walworth County, on to the greater Chicago area.

Through Madison, US 12 is a freeway with full access control . In addition, WisDOT has scheduled the construction of US 12 bypasses around Whitewater and Middleton to be completed in 2005.

US 12 is designated as a "connector route" in the WisDOT Corridors 2020 plan as shown in Figure 6 on page 19. The purpose of the connector system is to link significant economic and tourism centers to the backbone system in order to integrate them into the statewide and national transportation system. The criteria for connector highway design include highest standards of roadway width, passing opportunities, safety and driving comfort, where economically feasible[3]. In this region, US 12 serves the backbone routes of Interstate Highways 39, 90, 94 and 43.

To be designated a connector route; the roadway must meet certain established criteria. The segment of US 12 in the study area was so designated because it provides service to the trade centers of Fort Atkinson and Whitewater, is a segment that has current or predicted average daily truck volumes of greater than 625 in 1994 or greater than 1,050 by 2020, and has connections and direct service to Jefferson County, which is classified as a Tier 2 Manufacturing Center and a Tier 1 Agricultural Center.[4]

---

[3] *Corridors 2020 Review and Update.* Wisconsin Department of Transportation. June 1994.

[4] WisDOT classifies counties into three manufacturing "tiers" based on the number of businesses, number of employees, and value added. Agricultural counties were ranked into three tiers based on agricultural productivity. Tiers are ranked from 1 to 3 with Tier 1 locations having higher significance to the state.

In the project area, US 12 is a “principal arterial” throughout the study area. The highway is a two-lane rural roadway as it enters Fort Atkinson at the northwest on Madison Avenue, where it is a two lane urban section. Eastbound US 12 traffic continues on Madison Avenue until the route splits at Robert Street, continuing to South Third Street and then to Whitewater Avenue. Eastbound traffic then continues on Whitewater Avenue where it again becomes a two-lane rural roadway to the end of the study area at the US 12 Bypass of Whitewater. Westbound traffic enters Fort Atkinson at the south along Whitewater Avenue, continuing north on Main Street to Madison Avenue where it continues until it meets up again at Robert Street and continuing on Madison Avenue west to the intersection with the WIS 26 Bypass of Fort Atkinson. See Figure 7 on page 20.

The stretch of the study corridor between the Whitewater bypass and the intersection of Main and Madison Streets in Fort Atkinson is also designated state trunk highway 89 (WIS 89). WIS 89 is classified a “minor arterial” by the state.

As a fundamental link in the state highway system, this route’s primary purpose is to provide statewide mobility. The primary function of US 12 in the Fort Atkinson area is as a regional traffic carrier. Regional traffic has neither an origin nor destination in Fort Atkinson. It passes through the city. But for many of its trips, US 12 also acts as a local street providing a high level of local access. These dual roles often conflict. This is especially true within the city of Fort Atkinson, as evidenced by the Needs Assessment Study completed for the project in 2002.[5]

Along the US 12 alignment within Fort Atkinson, the different local uses provided include residential and business access, on street parking and river crossings. For many Fort Atkinson residents, US 12 provides access to their front door. US 12 provides businesses with direct access throughout the downtown area, on portions of Whitewater Avenue, Madison Avenue and South Third Street and along US 12 in the rural areas. Currently, parking is allowed along several sections of US 12 as it traverses the city of Fort Atkinson. Parallel parking spaces are available in the downtown area on Main Street and parking exists along portions of Robert Street, Whitewater Avenue, and South Third Street. US 12 crosses the Rock River on Robert Street and Main Street. These are the only bridges of the river in the downtown area. Other crossings are located west of Fort Atkinson on the WIS 26 bypass and east of Fort Atkinson on WIS 106.

Project Purpose

- Improve current and future regional traffic flow to serve inter-state and inter-regional travelers.
- Improve safety for users including pedestrians, bicyclists and motor vehicles.
- Accommodate heavy traffic volumes, including heavy trucks, so that the roadway meets the role of a Corridors 2020 and National Highway System (NHS) route.
- Improve the Level of Service of US 12 in the study area.

Project Need

US 12 is part of the NHS and is a Corridors 2020 Connector Route and so needs to serve the purposes of the State and National highway systems. There are a number of factors driving the need to improve mobility and safety of US 12 through the Ft. Atkinson area including reduced mobility, increasing travel demand and reduced roadway capacity, reduced safety and socio-economic demands.

---

[5] HNTB Corporation. *U.S. Highway 12 Fort Atkinson Area Needs Assessment.* Prepared for the Wisconsin Department of Transportation, District 1. 2002.

Factors Affecting Need

Reduced Mobility

Land access/mobility conflicts occur frequently within the corridor as the highway is called upon to meet its conflicting role of providing regional mobility and local land access.

Two distinct user groups travel on US 12 in the project area. They can be described as regionally- and locally-based users.

Regional trips (also known as through-trips) do not necessarily originate and/or are not always destined for points inside the city. In other words, motorists probably do not have the need to access any local land uses. They do not have to make high numbers of turning movements and do not need to have parking space on their route. Therefore, motorists making through-trips do not behave the same as motorists making local trips.

Local motorists generally have origins and destinations in the city. Local users rely on side-street intersections, and driveways, and curb-lane parking to access local land uses located along the corridor.

These differences in motorist needs create the potential for a number of operational traffic problems along the corridor.

Local motorists making turns to and from a side street impede through-movements on US 12 (Whitewater Avenue). It only takes one left turning vehicle from US 12 opposing as few as two or three vehicles in the oncoming direction to severely impede and many times bring through traffic to a stop. This is due to the presence of a single through-lane in each direction on US 12 with no provision for removing turning vehicles from the through vehicle traffic flow. See picture below.

The presence of several successive business driveways creates localized congestion on US 12 due to the number of turning vehicles requiring access to and from the various businesses located along the route. This becomes a particularly serious problem when business driveways generate high volumes of traffic.

Another problematic operational traffic condition exists when business driveways are located in close proximity to major intersecting streets. This condition has the potential to create many turn-related traffic problems for both through and local users. For many reasons, this is a situation where rear-end crashes (mostly turn-related) tend to take place. There are several examples of this condition throughout the US 12 corridor in Fort Atkinson. The safety assessment presented later indicates that 34% of the crashes within the corridor occurred at mid-block locations.

Oversized driveways can create driver confusion regarding where to make turns to and from the adjacent connecting street. When drivers have before them a large amount of unmarked paved surface area, an amount of uncertainty develops. Developments that generate high volumes of traffic often experience queuing problems both in the parking lot area and on the adjacent street.

When drivers travel on a US Highway such as US 12 they become conditioned to expect a set of roadway features and conditions that would suggest to them that they have the right-of-way. This is because a US Highway is typically the “main street” in town. Therefore, driver expectation is such that while on a US Highway they have the right-of-way and should not experience a number of turns, interruptions, excessive delays and recurring stops.

While traveling eastbound on US 12 from South Third Street onto Main Street, drivers have one block (approximately 300 feet) to make a full lane change to remain on US 12. If a driver, intending to follow US 12, fails to make a mid-block lane change at this location, he or she could mistakenly proceed southbound on Main Street and turn off of US 12. A more serious condition could develop should that same driver make a forced or unannounced lane change to remain on US 12. This has the added danger of cutting off a successive through vehicle in the center lane.

US 12 is designated a long truck route. Heavier trucks require more room to maneuver and so NHS standards for these types of highways require at least one 12-foot lane in each direction to accommodate heavy truck traffic. Currently, the roadway widths through the city do not meet this requirement. See the existing typical sections for the urban portion of US 12 in Figure 3 and Figure 4.

Another design standard that is minimally met in Fort Atkinson is the parking width. Sufficient parking width enables traffic to bypass a disabled vehicle better, maintain a greater separation of pedestrians and moving vehicles when sidewalks abut the curb as they do on Main Street, and to provide for parking. As an arterial street in a commercial district, standards dictate a minimum 7-foot parking width with a desired 12-foot width (10 foot travel lane plus 2 foot gutter pan). Currently in Fort Atkinson along US 12 there are many areas that barely meet the minimum parking width. On-street parking widths vary from 7 feet to 8 feet and none meet the desired 12-foot width along Main Street.

On US 12 in downtown Fort Atkinson, drivers are faced with a variety of recurring circumstances that have the potential to create operational problems. They include parking maneuvers, pedestrian activities, turning traffic, and lane changes. As previously mentioned, these recurring circumstances are not always easily recognized or anticipated by through motorists.

Increased Travel Demand and Reduced Roadway Capacity

Existing roadways and intersections will have trouble handling the increased traffic resulting from projected development. High levels of congestion are anticipated on US 12 within the Fort Atkinson Area.

Truck traffic, recreational traffic, and non-local traffic have an impact on the commercial and residential areas. Regional traffic traveling through the city will increasingly impact local system mobility and perceived quality of life factors such as noise and vibration, safety, speeding, and congestion. In addition to land access conflicts noted previously, the operational capacity of US 12 in the project area is negatively affected by increasing travel demand in the area. Annual Average Daily Traffic (AADT) projections were developed based on analyses of traffic patterns in the study area in conjunction with a review of potential future land development trip generation impacts according to each segment's proximity to the land use development and growth area zones. Existing Average Daily Traffic (ADT) is presented in Figure 8 on page 21.

The projected traffic volume for each segment was compared to the planning capacity of the facility type. The traffic volume that a roadway can safely handle is related to traffic mix (autos and trucks), peak hour characteristics, presence of traffic control devices, quality of the highway system's alignment, and other physical characteristics. Traffic data are presented in Table 9 on page 46.

The increased travel demand in the project area directly affects traffic operations on US 12, which is defined as Level of Service (LOS). LOS C is the required design capacity standard for Connector 2020 routes such as US 12. LOS refers to the overall quality of traffic flow at an intersection or mainline section. Levels range from very good, represented by LOS A, to very poor, represented by LOS F. In the study area, levels of service for the design year of 2030 are projected to be LOS D along the majority of the study corridor, except along Madison Avenue where it will reach a LOS C.

Parallel parking results in a reduction in capacity on typical streets, especially during peak traffic times. In areas of high turnover, interruptions in traffic flow on adjacent lanes occur as vehicles pull in and out of the parking spaces.[6]

---

[6] FDM 11-20-1

Reduced Safety

Compared to the statewide crash rate, existing roadway and intersection geometrics contribute to a higher frequency of crashes at a number of intersections. Increasing corridor traffic will cause safety problems to intensify, particularly at the Main Street intersections, and the Robert Street and Madison Avenue, and South Main and Rockwell intersections.

Pavement condition, notably in rural areas, contributes to safety problems, especially in poor weather conditions. The proposed project is necessary to correct existing and potential safety hazards. The existing crash rate is higher than the statewide average for similar facilities because of the existing geometrics and levels of traffic. Pavement conditions in some areas create hazardous conditions. The selected alternative would need to improve the safety of the highway.

Traffic crash data were compiled from a State of Wisconsin database for each US 12 intersecting street in the study corridors. The data included crashes that occurred at each intersection over a 7-year period from 1994 to 2000. During that time, 746 crashes were recorded. Of these, 492 crashes, or 66% occurred at intersections. The remaining 254 crashes (34%) occurred at various mid-block locations.

A high number of crashes do not necessarily equate to an unsafe intersection. The number of crashes must be considered in the context of the traffic volumes carried on a segment or through an intersection. This requires the calculation of a crash “rate” by which crash frequencies can be compared between alternative locations. Several US 12 intersecting streets in the city of Fort Atkinson display traffic crash rates that are considered above the “average” rate when considering all intersection crashes that took place in the corridor over the 7-year time frame. US 12 intersections with a higher-than-average crash rate are shown in Table 1 on page 14.

The statewide average annual crash rate from 1996 – 2000 for similar urban corridors in Wisconsin was 324 per 100 million vehicle miles of travel (MVMT). The average annual crash rate for the urban portion of US 12 over the 7-year period was 523, 61 percent above the average statewide rate during the same period. Table 1 shows the calculated crash rates for various sections of US 12 in the Fort Atkinson area.

Maintaining an adequate level of roadway and intersection safety is a considerable problem on portions of the US 12 corridor under today’s traffic volume, intersection geometry, and operational characteristics. Numerous access points and mainline roadway geometry (undivided 2-lane and narrow 4-lane with parking sections) along US 12 contribute to the high crash rate on segments of the corridor. Refer to Figure 7 on page 20.

On-street parking can be a contributing factor to traffic crashes due to improperly parked vehicles and pedestrians entering the street from between parked vehicles. On Main Street in Fort Atkinson, the parking lane width is narrow at 7 to 8 feet. The narrow lanes are a safety issue. This is an apparent problem in Fort Atkinson along Main Street, as evidenced by the posted signs that state it is unlawful to open your car door into traffic lanes.

Table 1: 1994-2000 US 12 Average Annual Crash Rates by Segment

Segment	Total Crashes	VMT/Yr.	Annual Avg. Crashes	Crashes per 100 MVMT	Exceeds Statewide Rate?1 (Yes/No)
CTH C – WIS 26 Interchange	15	2,200,950	2.1	97	No
WIS 26 - Banker Rd Intersection	20	3,003,220	2.9	95	No
Banker Rd - Roosevelt St Intersection	26	2,119,920	3.7	175	No
Roosevelt St – Robert St Intersection	66	1,467,300	9.4	643	Yes
Robert St - Riverside Dr Intersection	58	1,012,875	8.3	818	Yes
Riverside Dr - Janesville St Intersection	37	1,148,290	5.3	460	Yes
Janesville St - S Main St	24	443,840	3.4	772	Yes
Robert St - N Main St/N Third St Intersection	67	1,051,200	9.6	911	Yes
N Main St/N Third St - E Sherman St Intersection	84	547,500	12.0	2,192	Yes
E Sherman St - S Water St Intersection	52	930,750	7.4	798	Yes
S Water St - S Third St Intersection	107	657,000	15.3	2,327	Yes
S Third St - Elm St Intersection	43	1,103,760	6.1	557	Yes
Elm St - Hilltop Tr/Fox Hill Rd Intersection	46	1,685,205	6.6	390	Yes
Hilltop Tr/Fox Hill Rd - Hackbarth Rd Intersection	36	3,013,440	5.1	171	No
Hackbarth Road - Carnes Road Intersection	27	4,256,265	3.9	91	No
Carnes Road - Tri County Road Intersection	38	8,361,420	5.4	65	No
TOTAL - All segments	**746**	**33,002,935**	**106.6**	**323**	**No**

[1]324 per 100 MVMT

US 12, between Fort Atkinson and Whitewater is rutted with longitudinal depressions in the asphalt along the length of the highway. Some members of the public have commented that in wet weather, hydroplaning occurs, possibly due to water collecting in the depressions.

Socio-Economic Demands

Projected economic development and land use changes indicate a need to improve or add to the highway capacity.

Social demands and economic development factors will influence the transportation needs of a community. New employment opportunities, recreational facilities, schools, land use plans and commercial services all will affect the growth of Fort Atkinson and will influence whether people will choose to reside in the area. The Fort Atkinson area has all of the necessary activity centers that influence land use development. One example is the newly built high school and commercial businesses on the northwest side of Fort Atkinson. This area is beginning to experience increased impacts due to rising traffic volumes. In addition, residents indicated they felt there were safety issues in the newly developing area along the US 12 corridor.

Population and Growth Rates. Table 2 below includes the population characteristics of the communities most directly served by this portion of the US 12 corridor. The data show these communities are largely continuing to grow and develop compared to the State as a whole. This growth contributes to the increasing number of trips being made on US 12. Table 2 compares population distribution in southeast Wisconsin using 1970 to 2000 census figures and growth rates.

Table 2: Population Trends

Community	1970	1980	1990	2000	1990 –2000 Growth
C. of Fort Atkinson	9,164	9,785	10,213	11,621	13.8%
T. of Koshkonong	2,671	2,979	2,984	3,395	13.8%
T. of Oakland	1,984	2,240	2,526	2,887	14.3%
C. of Whitewater	12,038	11,520	12,636	13,437	6.3%
C. of Madison	171,809	170,616	190,766	208,054	9.1%
V. of Cambridge	689	844	963	1,101	14.3%
Jefferson County	60,060	66,152	67,783	75,784	11.8%
Dane County	290,272	323,545	367,085	416,088	13.3%
Walworth County	63,444	71,507	75,000	84,943	13.3%
Rock County	131,970	139,420	139,510	145,656	4.4%
Wisconsin	4,417,821	4,705,642	4,891,769	5,287,825	8.1%

Source: US Bureau of the Census

Land Use. Existing land use has been compared to planned land use from locally adopted land use plans and was used to forecast future growth and potential traffic generation that may occur from these planned changes in land use. Figure 9 on page 22 shows existing and planned land use in the study area.

Future Growth Areas. Adjacent land use and development is one of the most significant factors affecting highway operation. Roads must be viewed in terms of their service to and impact upon adjacent land uses, and vice-versa. Generally, local streets furnish access to abutting land and discourage through-traffic movement, while arterials provide a primary service to through-travel and avoid penetrating identifiable neighborhoods whenever possible. According to local land use plans, there is a high potential for additional residential trip generation in the northern portion of Fort Atkinson. The city of Fort Atkinson established an ad hoc planning committee to review existing land use plans for the city's northwest side.

One area where employment-related vehicle trip generation is expected to increase is the area south of Fort Atkinson, where additional industrial development is expected. Almost half of the future new commercial vehicle trip generation is expected to be near the South Fort WIS 26/Business WIS 26 (Janesville Street) interchange.

Business Climate. Economic data show that the study area has a healthy and growing economy, which will ultimately translate into increased demands on the transportation system. In Wisconsin, the labor force grew an average 1.9% per year from 1970 to the year 2000. In the 1970s, the labor force averaged strong 2.6% annual gains. Labor force growth is expected to slow from 2001 to 2025 due to retirement of the baby boomers. There is evidence that an economic recovery can provide job growth over the next few years as non-farm employment is expected to grow 1.2% in 2004 and 2.0% in 2005. Average growth is projected to be 1.7% annually over the next five years, whereas over the past five years it was 0.1%.[7]

In 2001, Jefferson County's labor force rate was 73.7%; higher than the state's 72.8% rate and the nation's 66.9% rate, but still lower than it had been in the late 1990s when it stood at 75% to 76%. The state expects Jefferson County's participation rates to be further reduced in the future, which will tighten the labor market. Jefferson County's unemployment rate averaged 3.9 percent in 2001 and 4.7 percent in 2002.

[7] Wisconsin Economic Outlook. Wisconsin Department of Revenue Division of Research and Policy. June 8, 2004.

Commuting patterns in Jefferson County suggest that most commuters are going to Waukesha County with a significant number going to Dane County.[8] A telephone survey conducted as part of the *US 12 Fort Atkinson Needs Assessment Study* found that over half of the respondents surveyed (52 percent) stated that they worked in Fort Atkinson as shown in Table 3 below.

Table 3: Work Location of Survey Respondents

Work Location	Percent*
City of Fort Atkinson	52%
City of Whitewater	7
City of Watertown	1
City of Jefferson	11
Town of Koshkonong	4
Dane County	6
Rock County	4
Rural Jefferson County	6
Other	10

Source: St. Norbert College Survey Center

*Percentages were rounded up at the .5 level and down for levels below .5, leading to the percentages not totaling 100%.

Table 4: Jefferson County Civilian Labor Force Data

	1997	1998	1999	2000	2001	2002
Labor Force	42,196	41,897	41,343	43,277	43,266	42,292
Employed	40,911	40,747	40,344	42,082	41,591	40,293
Unemployed	1,285	1,150	999	1,195	1,675	1,999
Unemployment Rate	3.0%	2.7%	2.4%	2.8%	3.9%	4.7%

Source: Jefferson County Workforce Profile. Department of Workforce Development, Office of Economic Advisors. Jan. 2004

Employers are working to address the labor shortage situation by offering more competitive wages and benefits and providing training programs. Based on a survey of Jefferson County residents, 32% of the workers commute out of the County, and less than 19% said they would consider a job closer to home.[9]

Fort Atkinson, the second largest city in Jefferson County behind Watertown, has a large manufacturing sector with two industrial parks and plans for more industrial land use in the future as exhibited in their Master Plan.[10] The city has a wide range of retail and service business establishments including groceries, discount stores, specialty shops, restaurants, and a hospital.

---

[8] Jefferson County Workforce Profile. Wisconsin Department of Workforce Development Office of Economic Advisors. January 2004.

[9] Jefferson County Economic Development Corporation, March 2001.

[10] Discovery Group, Ltd. (September 1997) *Fort Atkinson Master Plan Update* prepared for the City of Fort Atkinson, Wisconsin.

The Fort Atkinson area contains a number of tourist destinations that attracts people from the State and Midwest. These include the Kettle Moraine State Forest, Whitewater Lake, University-related activities, the Fireside Theater in Fort Atkinson, Lake Geneva, and resorts in the Lake Geneva and Delavan areas. In addition, many people use US 12 from Illinois to reach Madison and the Wisconsin Dells. The John Muir and Emma F. Carlin mountain bike trails in the Kettle Moraine State Forest (Southern Unit) attract people region-wide, as does the State Forest itself. The Ice Age Trail crosses US 12 between Walworth County Trunk Highways P and O in the Kettle Moraine State Forest.

Jefferson County has a number of agricultural business operations that contribute to the area's economy.

Modal Interrelationships. Interrelationships between highways and other modes of transportation are important to WisDOT. WisDOT's Corridors 2020 Revision and Update of June 1994 reports that estimates of passenger diversion from further development of alternative transportation modes (such as rail), as called for under the most expansive of the State's Translinks 2020 multimodal plan alternatives, will have only limited potential to divert significant percentages of traffic off most Corridors 2020 routes. Alternative modes such as trains and busses are not currently planned for Fort Atkinson.

Planned Highway Improvements. Much of US 12 is already being considered for reconstruction between now and 2012. Corridors 2020 identifies the study area as congested and needing improvements. Table 5 shows state highway improvements already included in WisDOT's Six-Year Plan on or in the vicinity of US 12 in the Fort Atkinson area. Any proposed improvements to US 12 in the project area would need to be consistent with these proposed improvements to avoid forcing or foreclosing future actions. Some work on US 12 in this area has been postponed pending outcome of this environmental study and alternatives analysis.

Table 5: WisDOT Planned Highway Improvements

Scheduled Construction	Road	Location	Type of Improvements
2002 - 2005	US 12	Bypass of the city of Whitewater	Constructing a 2-lane bypass (with ROW acquired for 4 lanes) to the southwest of the city of Whitewater.
2003	US 12	Madison Avenue	Reconstructed the existing urban street; to modify intersection traffic operation, construct decorative lighting, terrace paving, and landscaping on Madison Avenue
2004	US 12	Cambridge to Fort Atkinson	Reconstruct 8.48 miles to provide 24 feet of pavement, 10-foot shoulders, 3 feet minimum paved
2011*	US 12	Fort Atkinson – Whitewater (Hilltop Trail to Woodlawn Road	Reconstruct existing roadway
2011*	US 12	Whitewater Avenue, South Third Street to Fox Hill Lane, Fort Atkinson	Reconstruct .92 miles of the existing urban street
2007	WIS 106	Rock River Bridge and approaches	Replace deficient existing structure
2007	WIS 106	Fort Atkinson - Edgewater Road to CTH CI	Recondition 9.84 miles to correct geometric deficiencies; provide 24 feet of pavement with 3-foot paved shoulders
2007	WIS 106	Sherman Avenue, Fort Atkinson - Robert Street to Edgewater Road	Reconstruct .98 miles of the existing urban street
2009	WIS 26	South Fort Interchange to North Fort Interchange	Construct two additional lanes to the Fort Atkinson Bypass

Source: Wisconsin Six-Year Highway Improvement Program - 2005-2011. WisDOT District 1. 2005.

* The projects that were scheduled to reconstruct US 12 in the study area have been delayed pending the outcome of this environmental study.

Conclusion

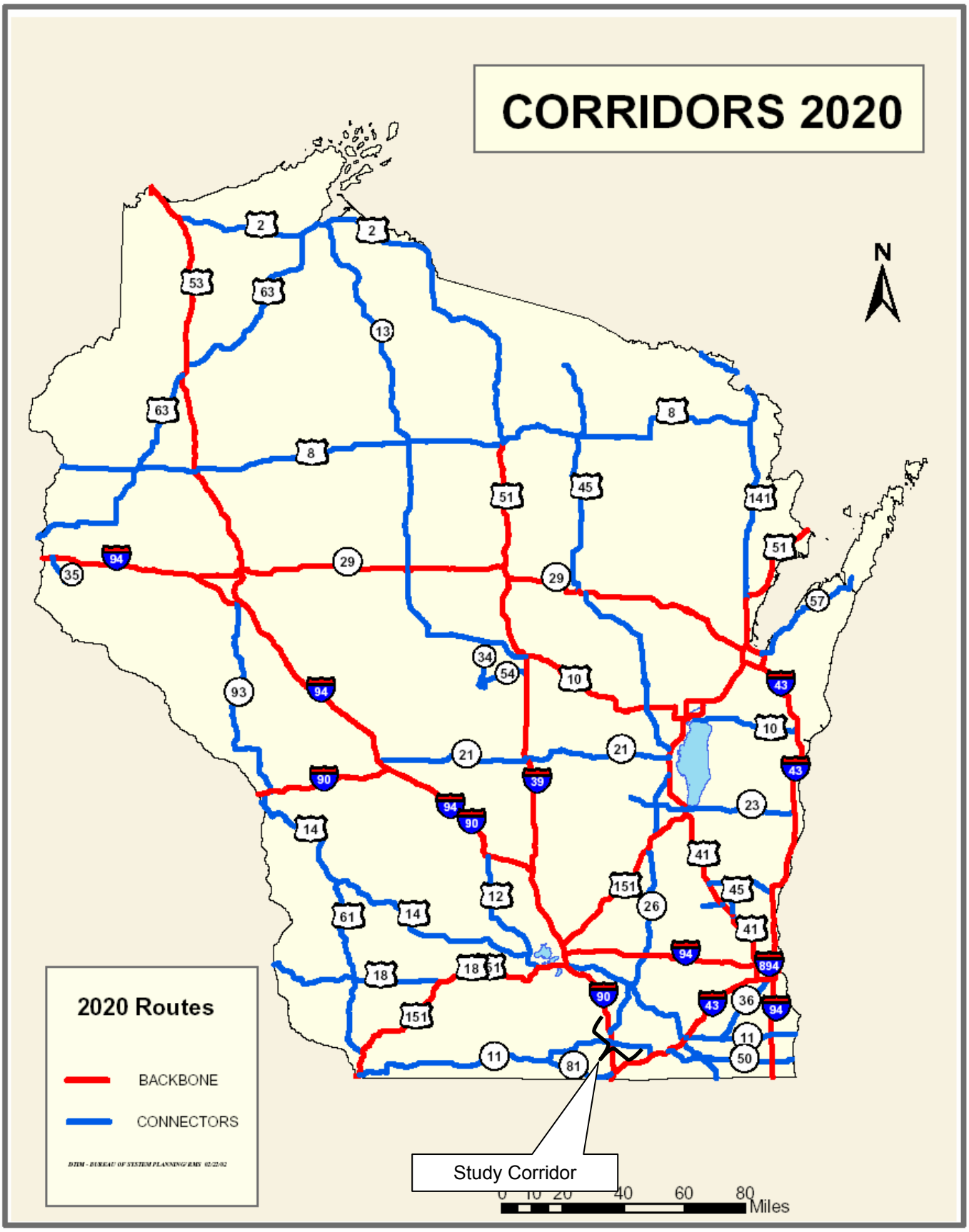
This purpose and need statement documents how existing conditions and future travel demand and traffic operations will impact US 12 in the Fort Atkinson area. US 12 in the Fort Atkinson area does not serve the purposes of the State and National Highway System for which it is intended.

US 12 is an important link in the State and National Highway Systems. Its purpose is for commercial, recreational and business travel for the entire region and accommodates the movement of goods and people from the Chicago area to Madison and beyond. US 12 is classified as a 2020 Connector route and as such needs to facilitate the mobility of through-traveling traffic. US 12 in the Fort Atkinson area currently does not serve the purpose of the State and National highway system for which it is intended. Traffic congestion, existing and planned land use, deteriorating pavement and geometric deficiencies prevent the highway from functioning as needed.

Traffic projections show this situation will worsen. The highway will experience increasing levels of traffic, lower levels of service, and safety problems, indicating the need for improvements.

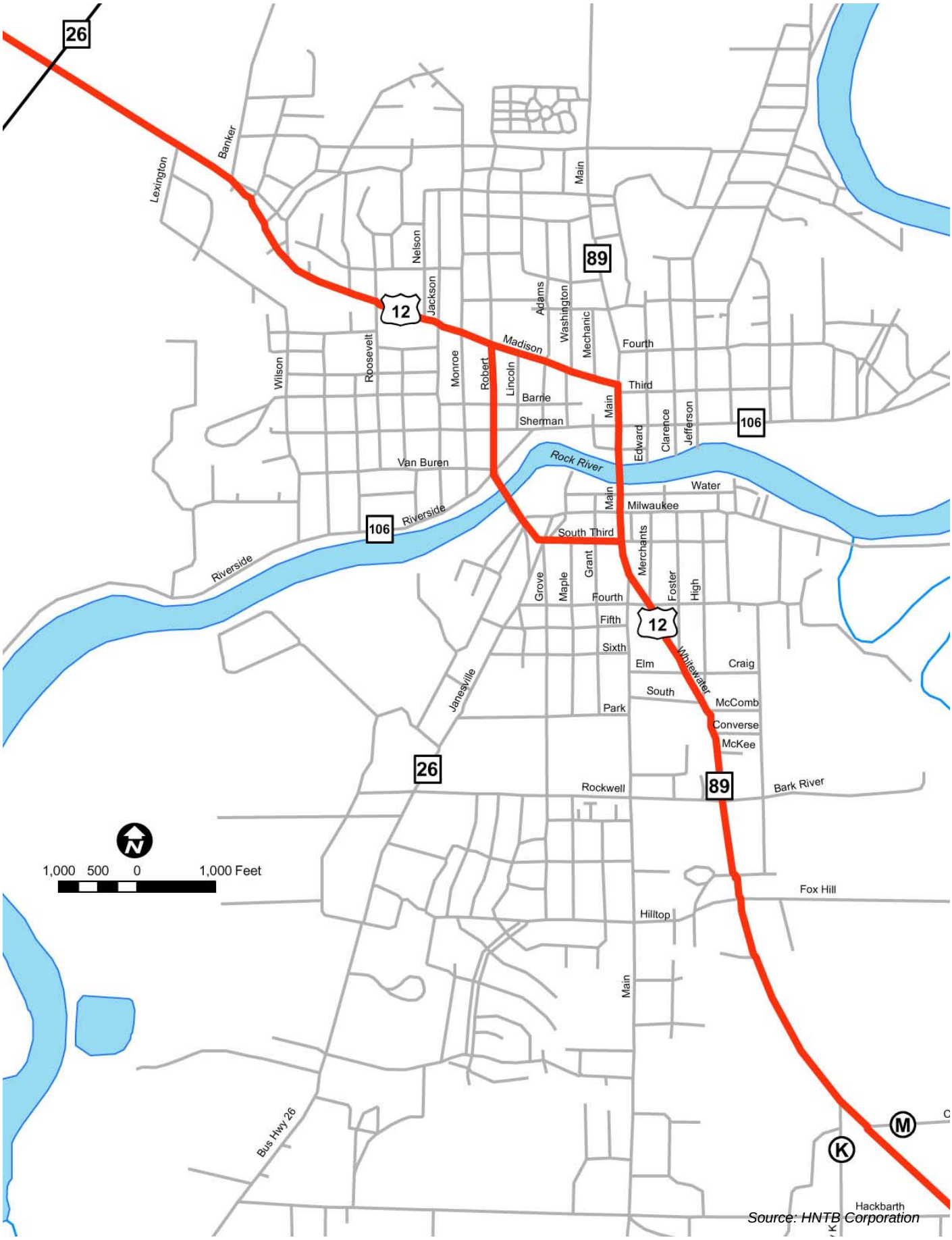
In order to alleviate the operational and safety problems along US 12 in the Fort Atkinson area, the following needs must be met.

- Improve current and future regional traffic flow to serve inter-state and inter-regional travelers.
- Improve safety on US 12 in the study area.
- Accommodate the heavy traffic volumes including heavy trucks as required of a State Connector Route and as a part of the National Highway System.
- Improve local system mobility, and decrease the impacts of noise, vibrations, and congestion.
- Address access/mobility conflicts.

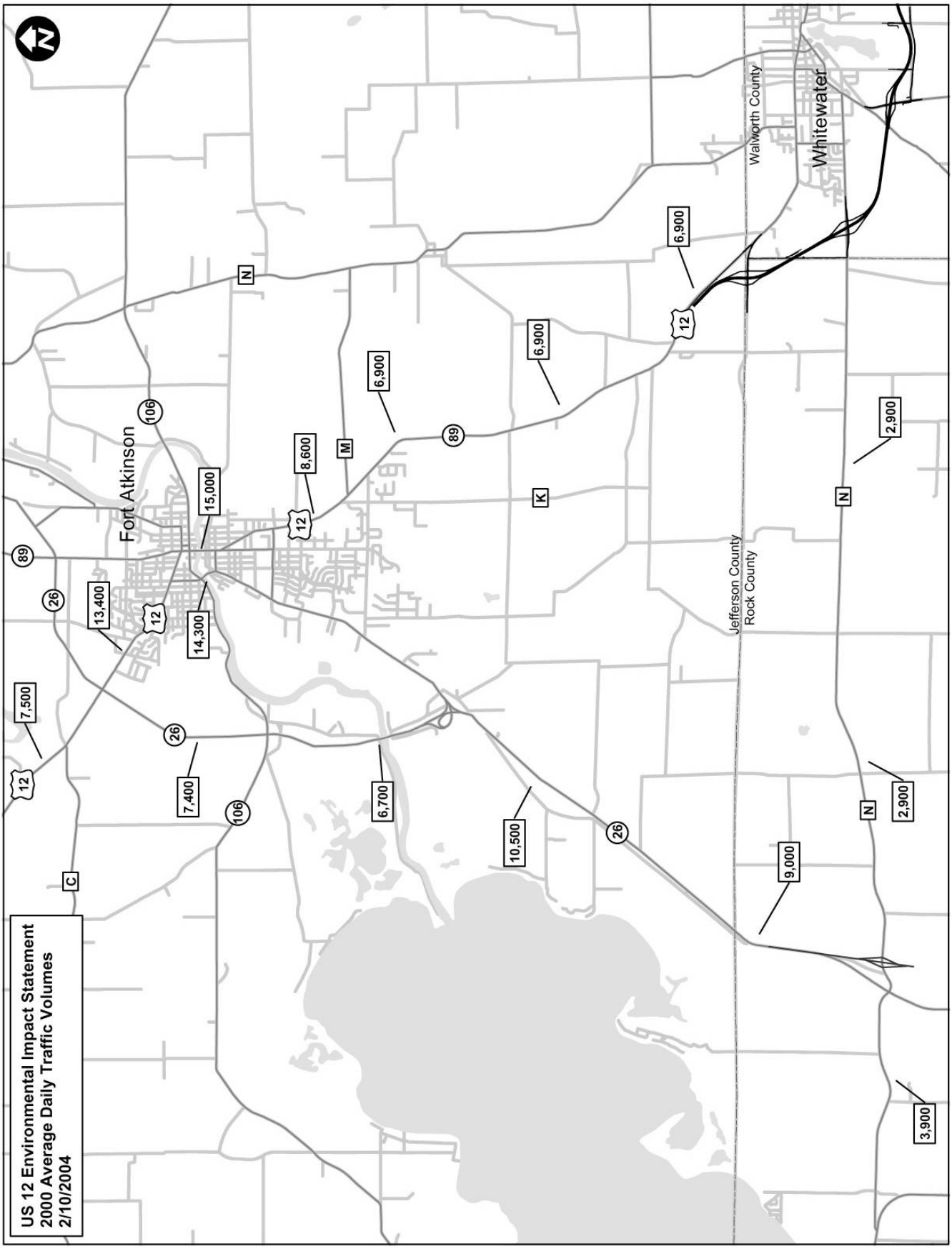


Source: WisDOT

Figure 6: Wisconsin Corridors 2020 Backbone and Connector Routes



Source: HNTB Corporation



Source: HNTB Corporation

Figure 8: Existing (2000) Average Daily Traffic (ADT)

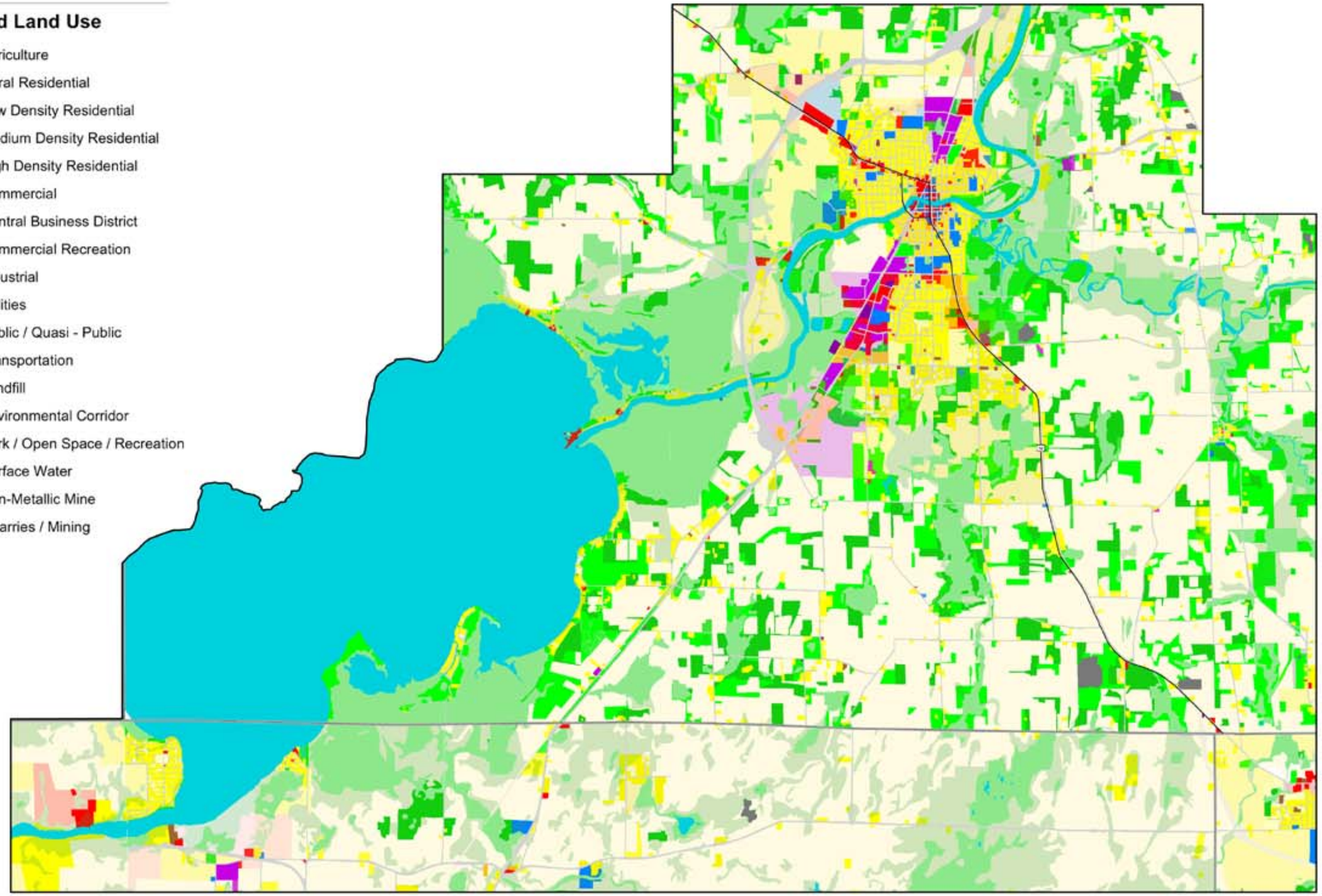
LEGEND

Existing Land Use	Planned Land Use
Agriculture	Agriculture
Rural Residential	Rural Residential
Low Density Residential	Low Density Residential
Medium Density Residential	Medium Density Residential
High Density Residential	High Density Residential
Commercial	Commercial
Central Business District	Central Business District
Commercial Recreation	Commercial Recreation
Industrial	Industrial
Utilities	Utilities
Public / Quasi - Public	Public / Quasi - Public
Transportation	Transportation
Landfill	Landfill
Environmental Corridor	Environmental Corridor
Park / Open Space / Recreation	Park / Open Space / Recreation
Surface Water	Surface Water
Non-Metallic Mine	Non-Metallic Mine
Quarries / Mining	Quarries / Mining

Note: Planned land uses shown in lighter shades.

Source: City of Fort Atkinson, Jefferson County, Rock County, SEWRPC, and HNTB. 2002

N



Source: City of Fort Atkinson, Town of Koshkonong, Jefferson County, Rock County, SEWRPC and HNTB Corporation, 2002

4. Description of Alternatives Considered

Summary of the alternatives considered and if they are not proposed for adoption, why not.

NOTE: In the DEIS, none of the alternatives are selected as a preferred alternative.

Alternatives Selection Process

40 CFR 1502.14(a) requires that a representative number of reasonable alternatives must be presented and evaluated in detail in the EIS. Although there are an unlimited number of possibilities, the EIS need only evaluate a reasonable range of alternatives. Eighteen alternative potential highway improvements were developed to potentially address the identified problems, see Table 6. These alternatives were screened for meeting purpose and need, environmental considerations, technical feasibility and economic feasibility, and meeting purpose and need. To assist in the preliminary evaluation of the alternatives, an *Initial Environmental Screening* was conducted to compare the alternatives and to help decide which should be carried forward for detailed study. In addition, an *Alternatives Assessment Worksheet* was completed with the assistance of the public, Advisory Committee and the agencies to detail the benefits and drawbacks of each alternative. See Appendix A.

Table 6: Summary of the Broad Range of Alternatives Considered

Alternative	Description	Selected for detailed study?
1	**No Action**	**Yes**
1a	**TSM**	**Yes**
2	Through-city widening to achieve a LOS C	No
2a	Through-city widening to achieve a LOS D	No
2b	**Through-city one-way pair**	**Yes**
2c	Westside rerouting - Reena Ave. extended to Rockwell or Highland Ave. (City implements)	No
2d	City designated truck route along Rockwell Avenue	No
2e	Three-lane Main Street with 2 way left turn lane	No
2f	Third downtown Fort Atkinson bridge	No
3	**Rock County Highway N from WIS 26 to Whitewater**	**Yes**
3a	Rock County Highway N from Newville to Whitewater	No
4	Outer East - Jefferson County Highway N – Bypass	No
5	East Fort Atkinson Bypass	No
6	Near South Fort Atkinson Local Road Bypass	No
7	**South Bypass from US 12 to WIS 26 Interchange**	**Yes**
7a	**South Bypass avoiding wetlands**	**Yes**
8	West-side arterial (Reena Avenue extended to Rockwell/Highland Avenue Extension)	No
9	Star School Road	No

Each alternative was proposed to address needs identified in the Needs Assessment Study.[11] See the Purpose and Need Statement in Item 3 beginning on page 9. The Purpose and Need Statement was broadly defined so that several viable alternatives could be identified. Alternatives not meeting purpose and need *and* not supported by the local citizenry were rejected as not practicable. Those alternatives that met purpose and need including those that had a degree of public expectancy that they would be studied in detail were retained for further consideration in this document. Conceptual alignments for each alternative were drawn up and impact screening criteria were applied as shown in Table 7 on page 26. The initial screening criteria included adherence to design standards, the need to

[11] HNTB Corporation. *U.S. Highway 12 Fort Atkinson Area Needs Assessment.* Prepared for the Wisconsin Department of Transportation, District 1. 2002.

improve safety and improve traffic operations, preliminary cost estimates and a preliminary assessment of environmental impacts.

The impact estimates for the initial alternatives screening were based on readily available data. Estimated construction costs at the time did not include the purchase of right-of-way or relocations. Estimated acreages were based on existing land use inventories collected by the local agencies. The design of each alignment strived to minimize the amount of right-of-way acquisition and relocations. As data and information was gathered, WisDOT updated and presented it to the Advisory Committee and to the public at public information meetings. The public review process is summarized on page 170.

The alternatives selected to undergo detailed study in the draft EIS represent the full spectrum of reasonable alternatives. Each of the selected alternatives connect logical termini and are of sufficient length to address environmental matters on a broad scope, have independent utility and do not restrict consideration of alternatives for other reasonable foreseeable transportation improvements.[12] Since US 12 is part of the National Highway System and is designated as a Connector Route in the State's Corridors 2020 plan, all alternatives were defined as meeting Corridors 2020 and NHS design standards.

Input from local citizens and cooperating agencies, local municipalities and counties and the Advisory Committee were taken into consideration in the selection of which alternatives should be carried forward for detailed study. Some alternatives were on alignments controlled by local municipalities. If the controlling municipality indicated they would not agree to a jurisdictional transfer, the alternative was dismissed because it was deemed infeasible and not practicable.

In consideration of the public and agency comments and discussions, traffic studies and environmental impact screening, WisDOT selected six out of the initial eighteen alternatives.

Note that in the DEIS all six alternatives were studied to the same degree as required by NEPA. Not all alternatives required the same typical section; with the proposed number of lanes for each alternative being based upon projected average daily traffic and application of the appropriate functional classification and considering route continuity. Alternatives that proposed two-lane facilities were given a typical 200-foot right-of-way for impact assessment purposes while four-lane facilities had a typical 400-foot right-of-way.

---

[12] These requirements are pursuant to *FHWA Technical Advisory Guidance for Preparing and Processing Environmental and Section 4(F) Documents*

Table 7: Draft Summary of Impacts Used for Alternatives Screening From March 2004

US 12 Fort Atkinson EIS - WisDOT ID 3575-09-01 - Jefferson and Rock Counties

Environmental Issues	Measure	Alt 1 No Action	TSM Alt Transportation System Management	Alt 2b Through City 1-way pr.	Alt 3 Rock Co. N Whitewater to STH 26	Alt 7 South Bypass	Alt 7a Wetland Avoidance Alternative
Project Length							
Length to be constructed	Miles	0		4.9	7.6	5.9	5.9
Project distance between CTH S interchange of Whitewater Bypass and WIS 26 interchange northwest of Fort	Miles			8.3	17.2	9.9	9.6
Project Cost							
Estimated construction cost	Million $	$0		$16.2	$12.4	$30.4	$28.9
Estimated right of way and relocation cost	Million $	$0		$8.6	$6.9	$9.8	$11.7
Total Estimated Cost	Million $	$0		$24.80	$19.3	$40.2	$40.6
Estimated Direct Real Estate Impacts Within Study Limits of Each Alternative							
Houses	Number	N/A		37	20	23	18
Commercial /Industrial sites, including dairies	Number	N/A		10	5	5	5
Dairies	Number	N/A					
Estimated Environmental Impacts Within Study Limits of Each Alternative							
Total area in agriculture	Acres	0		88	83	257	239
Wetlands	Acres	0		2	2	12	2
Woodlands	Acres	0		11	0	19	23
Floodplain	Acres	No		2	1	25	4
Endangered species	Yes/No	No		Maybe	Maybe	Likely	Maybe
Registered and potentially eligible historic properties	Number	2 Districts		2 Districts 3 sites	3	0	0
Archaeological Sites known	Number	N/A		High potential	High potential	3 sites/ High potential	High potential
New and rebuilt interchanges	Number	0		0	0	4	4
River and stream crossings	Number	0		3	2	3	3
Parks, state wildlife areas, school yard	Number	0		3	0	0	0

Explanatory Notes:

This information is preliminary and is estimated based on readily available data and not based on detailed engineering.

If there is no data in a matrix cell, the information is not figured or available yet.

Estimates of acreages are based on existing land use inventories collected by the local agencies. Acreages were determined using GIS. Numbers were rounded and are approximate.

Buildings impacted are those that would be within proposed right-of-way of the study corridors. No conceptual stage relocation study has been completed at this time. Relocations needed and real estate costs are rough estimates.

Length measurements do not include the interchange at 12/26 northwest of Fort Atkinson.

DRAFT

Other Alternatives Considered and dismissed

Through-City LOS C (Alternative 2)	Rockwell Avenue Extension (Alternative 8)
Through-City at Level of Service D (Alternative 2A)	Star School Road Bypass
Third Downtown Bridge (Merchant/Edwards and High Street Alignments)	Rock County N from Whitewater to I-39 (Alternative 3a)
Main Street 3-Lane Two Way Left Turn Lane (TWLTL)	Jefferson County N (East Side of Fort Atkinson) (Alternative 4)
Rockwell Avenue Designated Truck Route	Near East Fort Atkinson Bypass (Alternative 5)
West Side Arterial (Reena Avenue Extended to Rockwell/Highland Avenue)	Inner South Arterial (2 lane facility) (Alternative 6)

PLEASE NOTE: A similar table has been updated for the Draft EIS. The above table contains the information that decision-makers used to conclude which alternatives should be studied in detail in the DEIS. Some spaces are left blank because the information was unknown at the time.

Description of alternatives eliminated from further study
Initial screening criteria were applied to the alternatives and some were eliminated from further study because they were deemed not practicable, infeasible or unable to meet purpose and need. The drawbacks of each alternative as identified at meetings with the public and with agencies are detailed in the *Alternatives Assessment Worksheet* presented in Appendix A.

The following is a summary of the alternatives that were considered and dismissed. Typical Sections for the Alternatives are shown in Figure 11 on page 37. The locations of the Alternatives are shown in Figure 2 on page 5.

Alternative 2 – Improve Through-City Route to a LOS C

WisDOT reviewed what it would take to improve the existing highway to meet the standards of a Corridors 2020 connector route, which recommends a LOS C.[13] See Figure 10 on page 36.

Because of the high signal density on Main Street it is difficult to increase arterial capacity without widening the roadway to accommodate wider lanes. So, although this alternative uses the existing route, several drawbacks were cited including severe impacts due to the widening. The downtown area of Fort Atkinson has National Register historic districts that would be adversely affected by removal of buildings fronting along one side of Main Street to accommodate the widening. WisDOT's preliminary estimate included 27 commercial buildings and 10 homes that would need to be acquired and demolished to accommodate the widening.

In addition, Alternative 2 would have required the elimination of downtown on-street parking with limited or no options for replacement parking. The City felt these impacts would "undermine" the public and private investment that has been recently made in building renovation and river walk development. They felt it would preclude any future development in Fort Atkinson's downtown (*see Chamber of Commerce Resolution 3-18-03*). Overall, this alternative was not favored by Fort Atkinson, the Town of Koshkonong, or the local group Friends of Koshkonong (*see also Industrial Development Resolution 3-20-03*). Resolutions from local agencies are presented in Appendix F. This alternative was not acceptable to the Wisconsin Historical Society. These impacts to historic properties would be inconsistent with the requirements of Section 4(f) of the Department of Transportation Act.

Alternative 2 would provide no improvements to pedestrian and bicyclist safety and would retain the mix of local and regional traffic conflicts. It would not reduce the problem of multiple local access points and concerns with multiple sharp turns that would be difficult for heavy truck traffic, which makes up a third of the through-trips.

Because this alternative does not meet purpose and need, was not well received by the public, and would have Section 4(f) impacts, Alternative 2 was eliminated from detailed study in the DEIS.

Alternative 2a – Through-City Minimal Widening (LOS D)

Alternative 2a involves minimal widening only at the intersections. A LOS D in the year 2030 was attained with this alternative. Although this is a low-cost alternative, less invasive than Alternative 2, and it would provide some improvement in traffic flow, it would not address the purpose and need to eliminate the mix of regional and local traffic. Parking would still be lost on Main Street and pedestrian safety would not be addressed. The LOS D would not meet the intent of a Corridors 2020 Connector Route. This alternative would not reduce the problem of multiple local access points and concerns with multiple turns that would be difficult for heavy truck traffic, which makes up approximately one-third of the through-trips.

Because of these reasons, Alternative 2a was eliminated from detailed study in the DEIS. See Figure 10 on page 36.

Alternative 2c - City Implemented West side Rerouting (Reena Avenue extended to Rockwell or Highland Avenues)

---

[13] LOS, or Level of Service, refers to the overall quality of traffic flow at an intersection or mainline section. Levels range from very good, represented by LOS A, to very poor, represented by LOS F. LOS C or better operating conditions are typically considered acceptable.

Alternative 2c is to extend Reena Avenue to Rockwell or Highland Avenues. This alternative would be a 2 lane collector. The benefit would be that this would provide an additional river crossing and would serve planned development areas in Fort Atkinson. It would remove some local trips from the WIS 26 corridor and would improve traffic flow between the west to south sides of Fort Atkinson.

Impacts associated with this alternative include high wetland impacts, impacts to historic property; the Jones Dairy Farm and an archaeological site. It would only minimally improve traffic volumes on Main Street and Whitewater Avenue and would not address the local/regional traffic mix. This alternative would only serve to move the traffic to other local streets, so it would not meet the need to reduce the problem of multiple local access points.

Since the alternative does not meet the purpose and need and since it would need to be implemented by the City of Fort Atkinson, this alternative was found to be impracticable and was eliminated from detailed study in the DEIS. See Figure 10 on page 36.

Alternative 2d - Rockwell Street Truck Route

DNR requested that WisDOT consider an alternate route for semi-truck traffic to relieve pressure on the downtown central business district. Rockwell Avenue was a suggested route; however the decision to make Rockwell a truck route would be under the control of Fort Atkinson and must be funded by the City. Although this alternative could possibly redirect some traffic, WisDOT cannot limit semi-truck use on US 12 per state and federal law. Trucks would continue to go downtown. This alternative would only serve to move the traffic to other local streets, so would not meet the need to reduce the problem of multiple local access points. The local/regional traffic mix issue would not be addressed.

Because of these reasons, Alternative 2d was found to be impracticable and was eliminated from detailed study in the DEIS. See Figure 10 on page 36.

Alternative 2e - Three-lane Main Street with Two-way Left Turn Lane (TWLTL)

The Advisory Committee suggested looking at a two-way left turn lane in the downtown area in order to maintain on-street parking. There would be a reduction in travel speed to accommodate the TWLTL and there are few mid-block left-turn requirements. It would not meet the need to reduce the problem of multiple local access points and concerns with multiple sharp turns that would be difficult for heavy truck traffic, which makes up a third of the through-trips. The local/regional traffic mix would not be addressed. Alternative 2e was not supported by any interest group, and pedestrian safety may be impaired further.

Since this alternative does not meet purpose and need and since there was no public support, it was eliminated from further consideration. See Figure 10 on page 36.

Alternative 2f - Third Downtown Bridge

Members of the Advisory Committee and members of the public requested that DOT examine the possibility of constructing a third bridge in Fort Atkinson to relieve the traffic congestion. This alternative has been analyzed many times in the past including a 1978 study[14] as well as in the DEIS completed for the WIS 26 Bypass of Fort Atkinson in 1989. Currently there are two crossings of the Rock River in Fort Atkinson. An analysis conducted for this EIS shows that a third bridge could result in an estimated 20 to 30 percent reduction in traffic volumes on Main Street, and a 15 to 18 percent reduction on Robert Street. However, it would provide minimal improvements to traffic volume on Madison Street and Whitewater Avenue past the US 12 convergence/divergence points. See Figure 10 on page 36.

Although a third bridge would relieve some of the traffic problems on Main Street, it would only minimally affect traffic on Robert Street. This alternative would only serve to move the traffic to other local streets, so would not meet the need to reduce the problem of multiple local access points and concerns with multiple sharp turns that

[14] Draft Environmental Impact Statement Project I.D. 1393-02-00. State Trunk Highway 26 (Fort Atkinson Bypass). 1989.

would be difficult for heavy truck traffic, which makes up a third of the through-trips. The local/regional traffic mix would not be addressed.

This alternative would be under the control of the City of Fort Atkinson and a locally funded project because WisDOT's Local Bridge Improvement Assistance funding does not cover new bridges. A city-wide referendum to see if the citizens would want to fund the construction of a third bridge was held in the 1980s. The referendum failed.

For these reasons, a third bridge option was deemed infeasible and not practicable and did not meet the purpose and need and so was not carried forward for further study in the DEIS.

Alternative 3a – Far South (Interstate 39/90 to Whitewater)

This alternative commences at the US 12 Bypass of Whitewater and continues west on the existing alignment of Rock County N and then follows the WIS 59 and Rock County N alignment through Newville and over the Rock River to the I-39/I-90 interchange. The approximate travel length of this alternative is 13 miles/20.9 km.

In order to accommodate projected 2030 traffic needs, this alternative would warrant four lanes between I-39/90 and the planned WIS 26 interchange with CTH N. East of that point, the facility would require two lanes to the end of the project at the US 12 Whitewater bypass. Driveway and intersection access would be consolidated the entire length of the roadway. Interchanges would be required at WIS 59, WIS 26, and US 12.

Alternative 3a is an existing route, so it currently accommodates these movements for motorists choosing to use it. Therefore its potential to shift additional traffic and reduce congestion on US 12 is doubtful.

Many impacts would be associated with this alternative including the need to widen the bridge at Newville, and relocation impacts to approximately 67 homes. The Wisconsin Historical Society was concerned about the high likelihood of impacting large, later period archaeological sites and burials especially since this alternative is very close to some of Wisconsin's prime archaeological sites near Lake Koshkonong. General impacts related to right-of-way acquisition would be comparatively high due to its long length. In addition, costs would be higher than Alternative 3 due to additional lanes on WIS 59 and the bridge improvements at Newville.

Being approximately 7 miles/11.3 km south of Fort Atkinson on US 12, this alternative bypasses Fort Atkinson and Jefferson County and US 12 would no longer provide a parallel route, which is a criteria for a Corridors 2020 Connector, affecting the section of US 12 from Cambridge to Madison. This alternative would not meet the purpose of a National Highway System route. It will not provide a connection to the City of Fort Atkinson, an identified trade center, or Jefferson county, an identified manufacturing and agricultural center.[15] US 12 was designated a connector route because it connects these identified economic centers. If Alternative 3a were built, the continuity of US 12 as a connector route would be broken. As such, it does not support the National Highway System concept of maintaining a strong "grid" system of supporting highways as backup to Interstate system. This dual use of I 39/90 and US 12 was not supported by the Federal Highway Administration, especially since I 39/90 is at capacity and the area would still need a state highway between Cambridge and Fort Atkinson to address National Highway System needs.

For these reasons, Alternative 3a was not selected for further study in the DEIS.

Alternative 4 – Outer East – Jefferson County Highway N

This alternative is located approximately 3 miles/4.8 km east of Fort Atkinson, is approximately 9 miles/14.5 km long, and generally follows Jefferson County N from the US 12 Whitewater Bypass north to the WIS 26/WIS 89 interchange near the Fort Atkinson Municipal Airport. The route commences at the US 12 Whitewater bypass and goes north for 2 miles/3.2 km on new right-of-way to existing Jefferson County N. It then continues north on existing Jefferson County N for 5 miles/8.0 km through the community of Cold Springs, crossing Jefferson County M to just

[15] For more information about Corridors 2020 Routes and the National Highway System, *see* Question 2. Purpose and Need.

north of WIS 106. From there it continues from Jefferson County N north of WIS 106 on new right-of-way for 2 miles/3.2 km, across the Rock River to the WIS 26 interchange near the Fort Atkinson Municipal Airport.

Access would be by interchange only from the Whitewater Bypass to Jefferson County N. Driveway and intersection access would be consolidated from Jefferson County N to WIS 106. Access would be by interchange only from WIS 106 to WIS 26 with interchanges constructed at US 12, Jefferson County N, Jefferson County M, and WIS 106.

This alternative would have relatively high construction costs due to the long length, the need for interchanges at CTH M, WIS 106 and to tie into US 12 near Whitewater.

This alternative was not carried forward for further study because it was not supported by the public or agencies due to the fact that it would have relocated an estimated 35 homes and would have required 3 bridge crossings, had high wetland impacts and high farm impacts. In addition, this alternative was not consistent with City, County or Town planned development patterns.

Alternative 5 – Inner East

This alternative is approximately 9 miles/14.5 km long and located approximately 1.5 miles/2.4 km east of Fort Atkinson and would be constructed on new right-of-way. Alternative 5 commences at the US 12 Whitewater bypass, crosses Jefferson County M, the Bark River, WIS 106, Deer Creek, and the Rock River and then connects to the WIS 26 interchange north of Fort Atkinson.

Driveway and intersection access would be consolidated from the Whitewater Bypass to Whitewater Avenue. Access would be by interchange only from Whitewater Avenue to WIS 26. Interchanges would be constructed at US 12 on Whitewater Avenue and WIS 106. There would be an overpass at County M; but no intersection or interchange because it is too close to the US 12/Whitewater Avenue interchange.

This alternative was not supported by the public or agencies. WisDOT received a considerable number of letters against this alternative. Concerns from the local residents included loss of wetlands, habitat, prime, drained farmland, and negative impacts to Bark River Road, a state designated rustic road. Other estimated impacts included relocating approximately 35 homes, 4 new river crossings, and impacts in the floodplain. This alternative was not consistent with City, County or Town planned development patterns.

Alternative 5 carried enough traffic to be considered effective as a bypass, however due to the combination of high impacts and very low popularity, this alternative was rejected from further consideration.

Alternative 6 – Inner South – On all new alignment

Alternative 6 was proposed based upon a request by the public at the first public information meeting. This four-lane urban street alternative would be approximately 6 miles/9.7 km long and would begin at the US 12 Whitewater bypass, proceed north along the existing US 12 Whitewater Avenue alignment to approximately 0.5 miles/0.8 km south of Hackbarth Road, and then west to Bus 26/Janesville Avenue. Signalized intersections would be installed at WIS 26 and US 12. This alternative is located 2.5 miles/4.0 km south of South Third Street and would have a limited number of intersections but no driveways. The circuitous routing would require slower speed due to the adjacent urban uses. Future travel times are estimated to be slightly slower than existing US 12 route through Fort Atkinson.

An estimated 19 homes would be relocated. In addition, a large amount of wetland would be impacted. This alternative was not expected to carry substantial levels of regional traffic. Also, Alternative 6 was not publicly supported by any group. For these reasons Alternative 6 was eliminated from further study.

Alternative 8 – Near South

Alternative 8 would be an east-west route connecting US 12 to the WIS 106 interchange. This bypass is about 2.3 miles beginning at the intersection of US 12 and Rockwell Avenue in the City of Fort Atkinson. From this point the route would continue west along Rockwell Avenue for about .7 miles, cross Bus 26, continue on across open space

and wetlands for about 1 mile where it would bridge the Rock River. From there the route would connect to the existing WIS 106 interchange.

This alternative is very direct, short, and makes use of the WIS 106 interchange. It also provides a third river crossing for Fort Atkinson. With a 20% to 25% reduction in traffic volumes on Madison Avenue and Main Street, this alternative could relieve some traffic on Robert Street.

Alternative 8 would require a jurisdictional transfer from the City for Rockwell Avenue and they have indicated that they are not interested. The area around the WIS 26/Rockwell Avenue intersection is an employment center and is quite congested, so sending the US 12 traffic through there would further impair the intersection. Many sensitive uses were identified along Rockwell Avenue including an elementary school, a senior center and senior housing, a youth center, and soccer field. The widening of the roadway would take many commercial and industrial buildings and houses as well. There would be wetland impacts as well as severance of the National Register listed historic Jones Dairy Farm. These impacts to historic property would be inconsistent with the requirements of Section 4(f) of the Department of Transportation Act.

Because of these potential impacts and difficulties, this alternative was eliminated from further study.

Alternative 9 - Star School Road Bypass

Initially, DNR requested WisDOT investigate using Star School Road as a bypass route because it uses existing roads, would likely have similar traffic advantages as under Alternative 7, and may have lesser impacts to wetlands and agricultural lands than a bypass on new alignment.

As the alternative was studied further, it became apparent that there would still be high wetland and agricultural and relocation impacts. In addition, the Town of Koshkonong indicated that they would not agree to a jurisdictional transfer. Alternative 9 was not supported by the public or agencies and so for these reasons, it was eliminated from further detailed study in the DEIS.

Description of reasonable and feasible alternatives retained for further study
This project is being processed in accordance with the interagency streamlining effort to complete NEPA requirements concurrently with a Clean Water Act Section 404 permit to discharge fill or dredge to waters of the United States. Pursuant to NEPA, the alternatives chosen should be those that can accomplish the overall project purpose but are not unnecessarily constrained by being strictly available to the applicant. From the standpoint of the Section 404 review, alternatives must accomplish the overall project purpose, but they must also be practicable to WisDOT. Practicable is defined as being available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purposes. Practicable alternatives should include alternatives that do not discharge dredged or fill material into the waters of the United States and that avoid or minimize wetland impacts.

Consistent with the streamlining process and elimination of the above alternatives, the following alternatives were retained for further study in this EIS. Figure 5 on page 8 shows a map of all the alternatives considered in detail in this DEIS.

Alternative 1 – No Action

The “No-Action” alternative would be that no project takes place and the resulting environmental impacts of the other alternatives under study would not take place. This No-Action alternative serves as a “baseline” from which to compare the other alternative projects under consideration in this EIS. Therefore, Alternative 1 is the existing US 12 alignment with only safety and maintenance improvements to maintain continuing operation of the existing roadway. The projects listed in Table 5 on page 17 have funds committed and dedicated for their construction before 2030 and are considered part of the No-Action alternative.

The posted speed on the existing route is 25 mph downtown, 30-50mph in the transition areas between the city and the rural areas and 55 mph in the rural areas.

Alternative 1a - TSM Alternative - Transportation Systems Management (TSM) Improvements

It is FHWA policy to include a TSM alternative in all alternative analyses. TSM projects maximize the efficiency of the existing system using limited construction. Actions that could be considered to improve operations include installation of turning lanes, removal of parking lanes, signing, striping, and signal optimization. TSM techniques are typically low-cost supply-side adjustments implemented in the short-term to improve the use of the existing roadway and related facilities. Transit, carpool, HOV lanes and other similar operations improvements that would apply to larger urban communities were not considered in this study because they would not be relevant in the smaller community of Fort Atkinson and its surrounding agricultural areas.

Potential TSM improvements identified for US 12 in Fort Atkinson are illustrated in Figure 12 on page 38 and include providing or improving turning lanes, optimizing signal operations and removing parking as outlined in Table 8. The posted speeds would remain the same as existing.

Table 8: Alternative 1a: Transportation System Management (TSM) Improvements

Intersection or Street	Improvement
Robert Street/Madison Avenue intersection	Allow protected (left-turn arrow) and permitted left turns from the northbound lane
Robert Street mainline	Restrict parking during peak periods Improve pedestrian crosswalk markings
Robert Street/South Third Street intersection	Add advance overhead guide way signs to better direct regional travelers
Main Street/South Third Street intersection	Remove some parking near the intersection to allow for channelizing north leg left turn.
Main Street/Milwaukee Avenue intersection	Remove some parking near the intersection to allow for channelizing north/south left turn
Main Street mainline	Optimize cycle length and phasing on traffic signals for all movements Improve platooning (grouping) of vehicles by coordinating the signals Add pedestrian activation on Main Street crossings Add advance overhead guideway signs to better direct regional travelers
Main Street/Sherman Avenue	Remove some parking near the intersections to allow for channelizing north/south left turn
Madison Avenue North Main Street	Manage access and reduce driveway access near intersection
East Rockwell/Whitewater Avenue (US 12) intersection	Manage access and reduce driveway access near the intersection Realign Bark River Road/Rockwell Avenue intersection to form a 4-leg intersection.
Whitewater Avenue to CTH M	Reconstruct roadway to improve pavement conditions
US 12 south of Fort Atkinson, CTH M to US 12 Whitewater Bypass	Overlay existing roadway surface to remove rutting.

Alternative 2b – One-way pair system on existing US 12 through downtown Fort Atkinson

Alternative 2b was developed as the most practicable through-city alternative. It shows what could be done on the existing alignment to avoid the environmental impacts of a cross-country bypass on new alignment. A one-way pair system was suggested by the Advisory Committee.

In 1989, the DEIS for the WIS 26 bypass of Fort Atkinson[16] also considered as an alternative, a one-way pair system using Main Street and the Merchants Avenue/Edward Street Corridor (one block east of Main Street). The WIS 26 Bypass DEIS cited existing geometric deficiencies on Main Street and minimal potential for reconstruction to a facility meeting design standards for projected WIS 26/89 traffic volumes as reasons why it was dropped from further consideration.

Alternative 2b is shown in Figure 13 on page 39. This alternative would change existing US 12's split route with bi-directional traffic to a one-way pair, northbound on Main Street and southbound on Robert Street. Traffic modeling conducted in 2003-04 for this DEIS indicated that traffic volumes on Main and Robert Streets for the one-way pair would be comparable to the 2030 no-build levels, but could improve travel through Fort Atkinson for US 12/WIS 89 traffic. The traffic will redistribute and be more evenly divided between the two streets.

In town, the design speed would be 30 mph with a posted speed of 25 mph. In the rural segment, the design speed would be 60 mph with a posted speed of 55 mph. These limits are the same as exists now. Other roadway improvements necessary would include re-painting the lanes and adjusting signage to accommodate one-way traffic, a widening of the intersections of Robert Street/Third Street, Main Street/Madison Street and Third Street/Main Street to accommodate turning movements for semi-trucks.

Figure 14 and Figure 15 on pages 40 and on page 41 show the typical sections for US 12 in the urban areas of Fort Atkinson. The proposed section downtown would include two 11-foot outside lanes and one 12-foot center lane. Main Street would have 10-foot parking lanes on both sides, Robert Street would have a 10-foot parking lane on the west side only and Third and Madison Street would have no parking on either side.

See Figure 16 on page 42, which shows the typical sections for Alternative 2b south of Fort Atkinson, in the rural, urban and transition areas of Whitewater Avenue. Widening would occur along Whitewater Avenue and in the rural areas to accommodate these cross sections.

Since Alternative 2b would improve traffic flow, would result in fewer right-of-way and environmental impacts than a bypass and was requested to be studied by cooperating agencies and the project Advisory Committee, it was retained for further study in the DEIS.

Alternative 3 – Rock County Highway N from WIS 26 to Whitewater Bypass

Alternative 3 is shown in Figure 17 on page 43. This alternative would reroute US 12 along Rock County Highway N from the Whitewater US 12 Bypass to WIS 26 (8.3 miles/13.4 km). It would then continue north on WIS 26 to the WIS 26/US 12 interchange northwest of Fort Atkinson. This interchange would remain a diamond interchange and a stop would be required before continuing left onto US 12. The entire length of this alternative is 17.5 miles/28.2 km. Rock County N would remain a two-lane facility but would require widening in order to meet the design requirements of a Corridors 2020 connector route. It is currently designated a "major collector" by the County. It would require a slight realignment to avoid an historic property. Access along the length would be consolidated as much as possible by eliminating extra driveways. The design would include a "clear zone" of 30 feet outside the traveled way, which would require approximately one foot of pavement widening and two feet of shoulder widening on each side. Posted speed would be 55 mph and the design speed would be 60 mph.

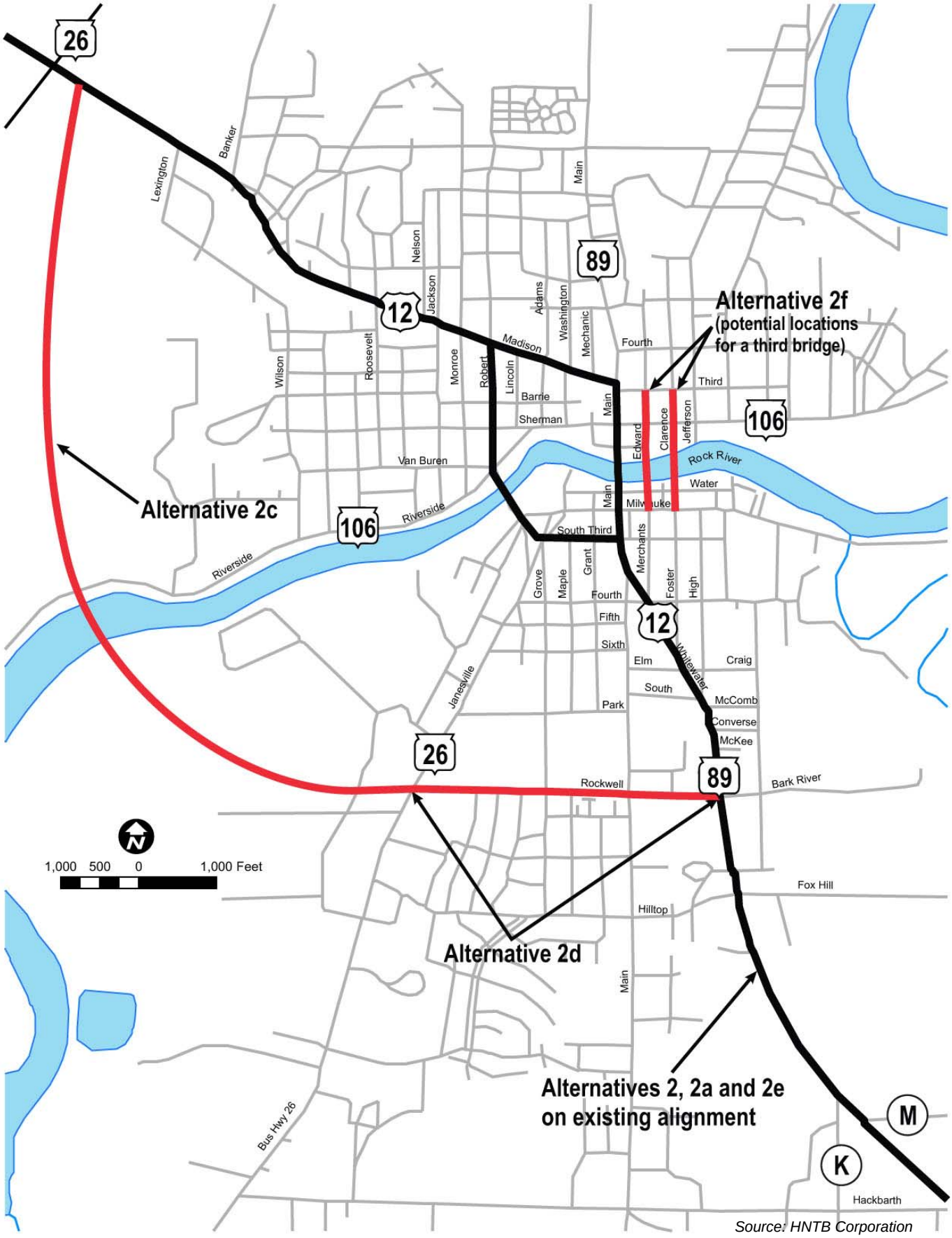
US 12, is also designated WIS 89 in most of the study area and will continue to be a state highway if Alternative 3 is constructed. Because of this, it will need to be reconstructed at some time in the near future due to current pavement conditions. This would be done as a separate two-lane reconstruction project from the US 12 Whitewater Bypass to South Third Street in Fort Atkinson. This distance is approximately 6.2 miles/10.0 km.

---

[16] Project I.D. 1393-02-00; State Trunk Highway 26 (Fort Atkinson Bypass), Jefferson County, Wisconsin, Final Environmental Impact Statement. Last dated July 16, 1991.

WisDOT would likely do a pavement overlay on Robert and South Third Streets in Fort Atkinson when those roads are transferred to the City's jurisdiction.

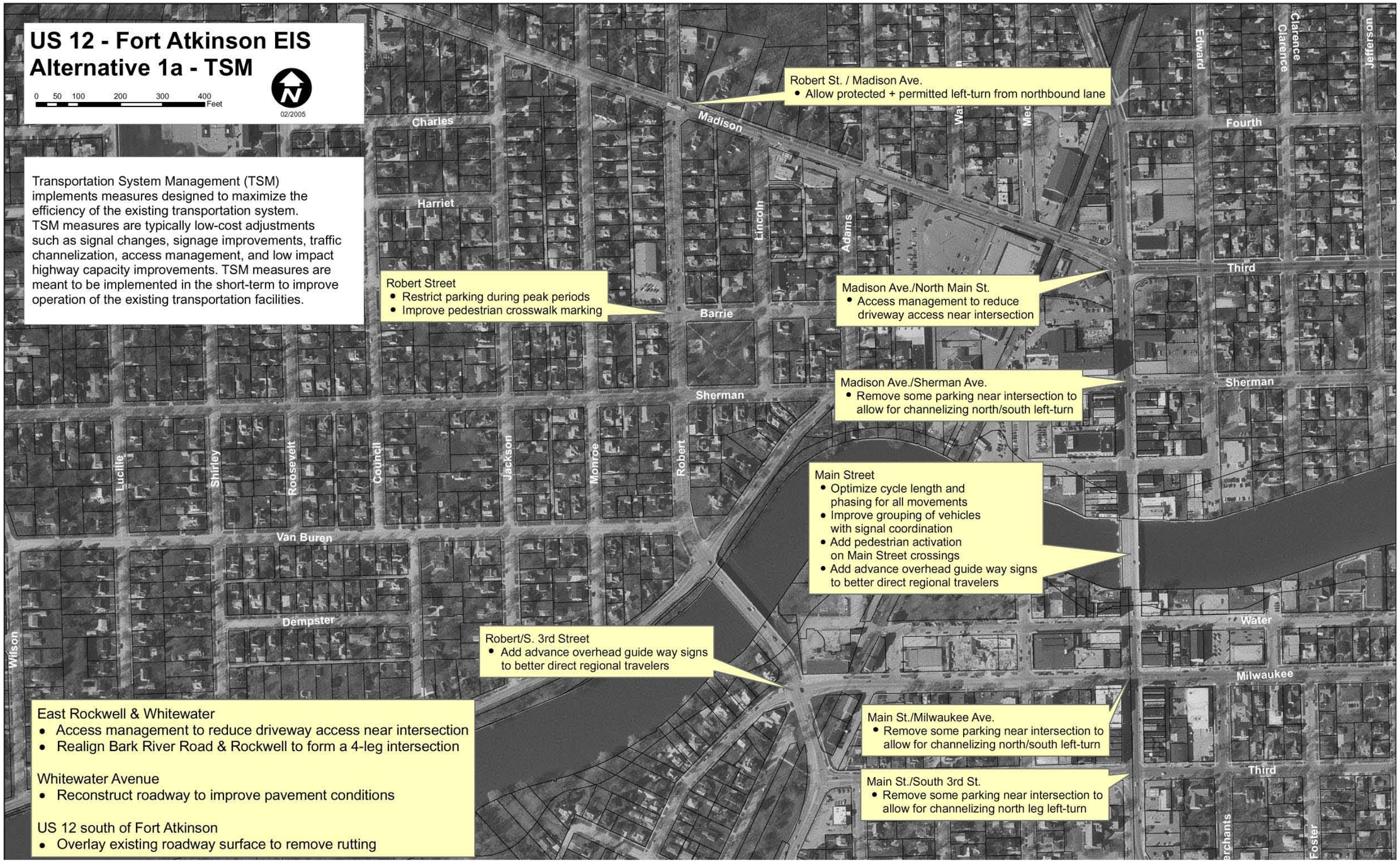
This alternative would meet purpose and need and it would not impact the sensitive wetland complex to the same extent as Alternative 7.

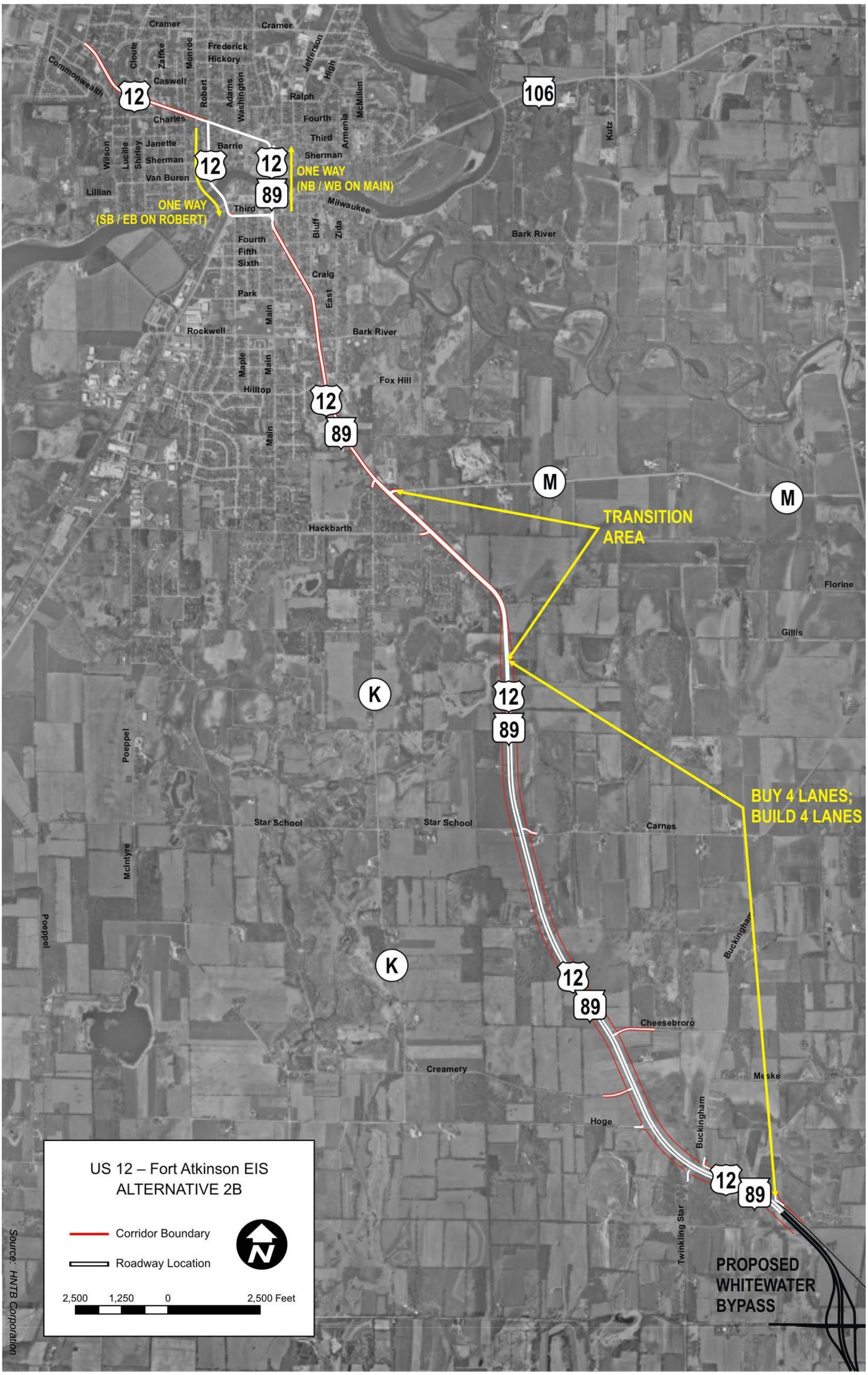


Source: HNTB Corporation

Figure 10: Alternatives 2, 2a, 2c, 2d, 2e, and 2f (dismissed from detailed study)

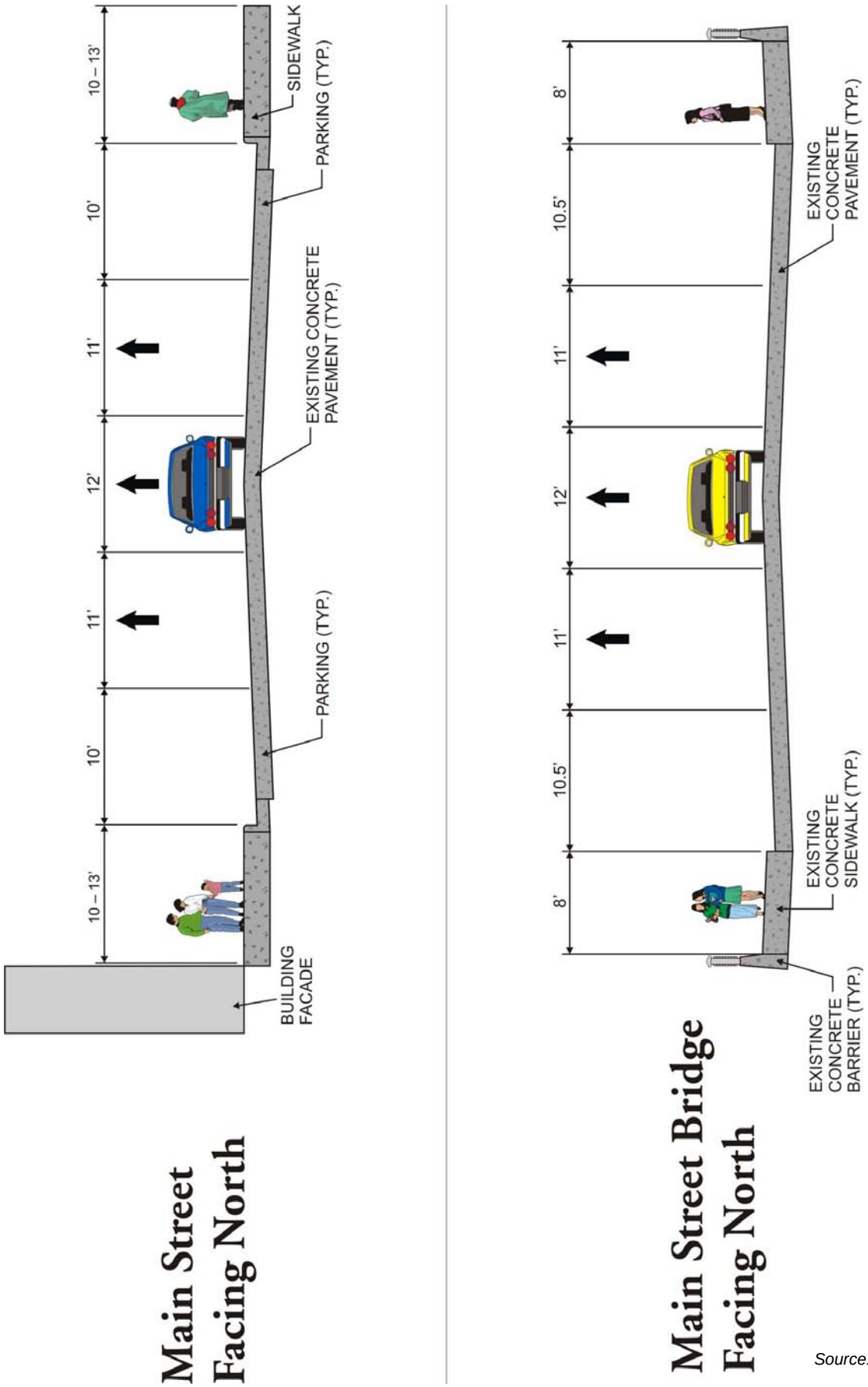
Source: HNTB Corporation


US 12 - Fort Atkinson EIS
Alternative 1a - TSM
0 50 100 200 300 400 Feet
02/2005
Transportation System Management (TSM) implements measures designed to maximize the efficiency of the existing transportation system. TSM measures are typically low-cost adjustments such as signal changes, signage improvements, traffic channelization, access management, and low impact highway capacity improvements. TSM measures are meant to be implemented in the short-term to improve operation of the existing transportation facilities.
Robert St. / Madison Ave.
• Allow protected + permitted left-turn from northbound lane
Robert Street
• Restrict parking during peak periods
• Improve pedestrian crosswalk marking
Madison Ave./North Main St.
• Access management to reduce driveway access near intersection
Madison Ave./Sherman Ave.
• Remove some parking near intersection to allow for channelizing north/south left-turn
Main Street
• Optimize cycle length and phasing for all movements
• Improve grouping of vehicles with signal coordination
• Add pedestrian activation on Main Street crossings
• Add advance overhead guide way signs to better direct regional travelers
Robert/S. 3rd Street
• Add advance overhead guide way signs to better direct regional travelers
Main St./Milwaukee Ave.
• Remove some parking near intersection to allow for channelizing north/south left-turn
Main St./South 3rd St.
• Remove some parking near intersection to allow for channelizing north leg left-turn
East Rockwell & Whitewater
• Access management to reduce driveway access near intersection
• Realign Bark River Road & Rockwell to form a 4-leg intersection
Whitewater Avenue
• Reconstruct roadway to improve pavement conditions
US 12 south of Fort Atkinson
• Overlay existing roadway surface to remove rutting
Charles
Harriet
Madison
Lincoln
Adams
Edward
Clarence
Fourth
Third
Barrie
Sherman
Lucille
Shirley
Roosevelt
Council
Jackson
Monroe
Robert
Van Buren
Dempster
Wilson
Water
Milwaukee
Foster



Source: HNTB Corporation

Figure 13: Alternative 2b

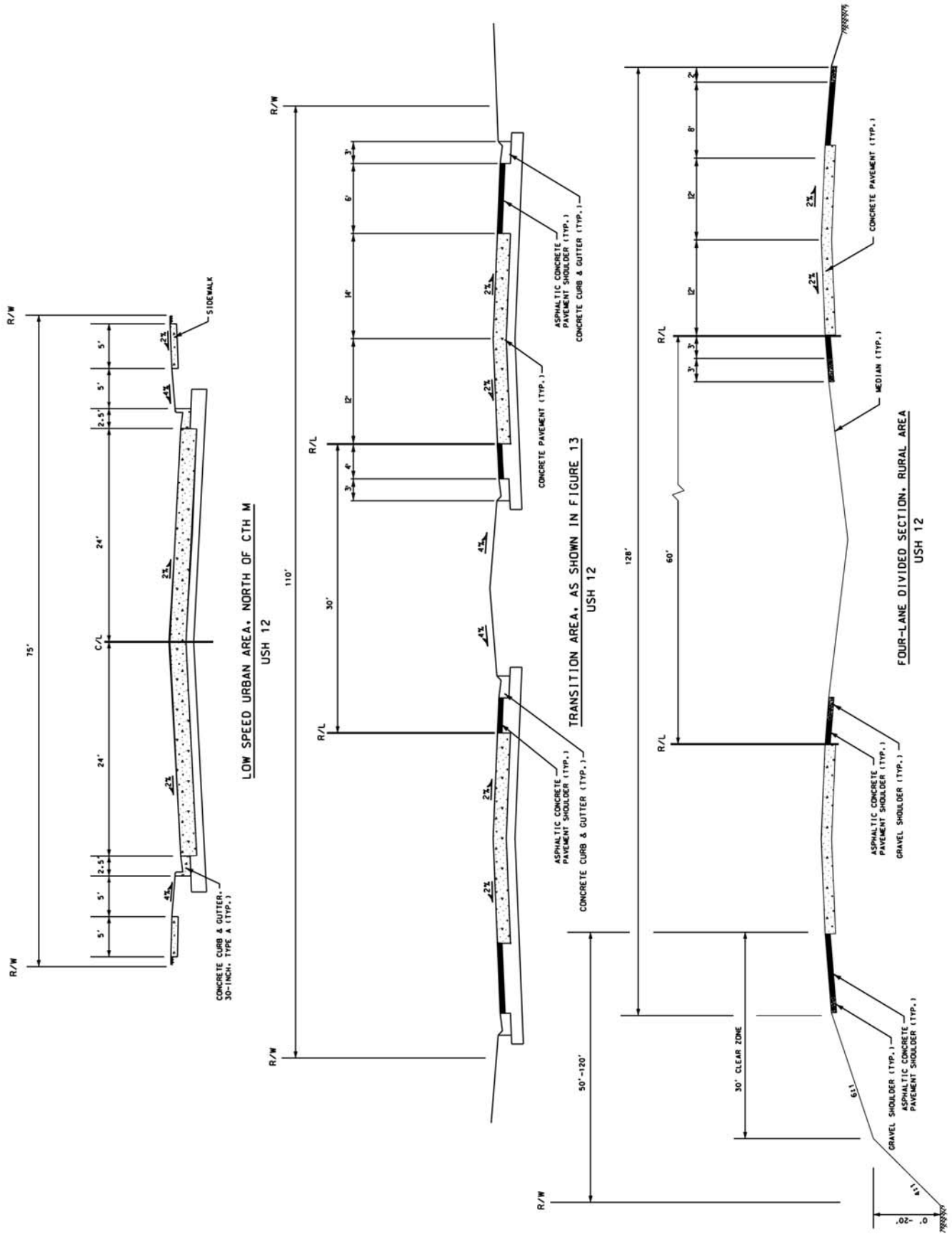


Source: HNTB Corporation

Figure 14: Alternative 2b Main Street Typical Sections

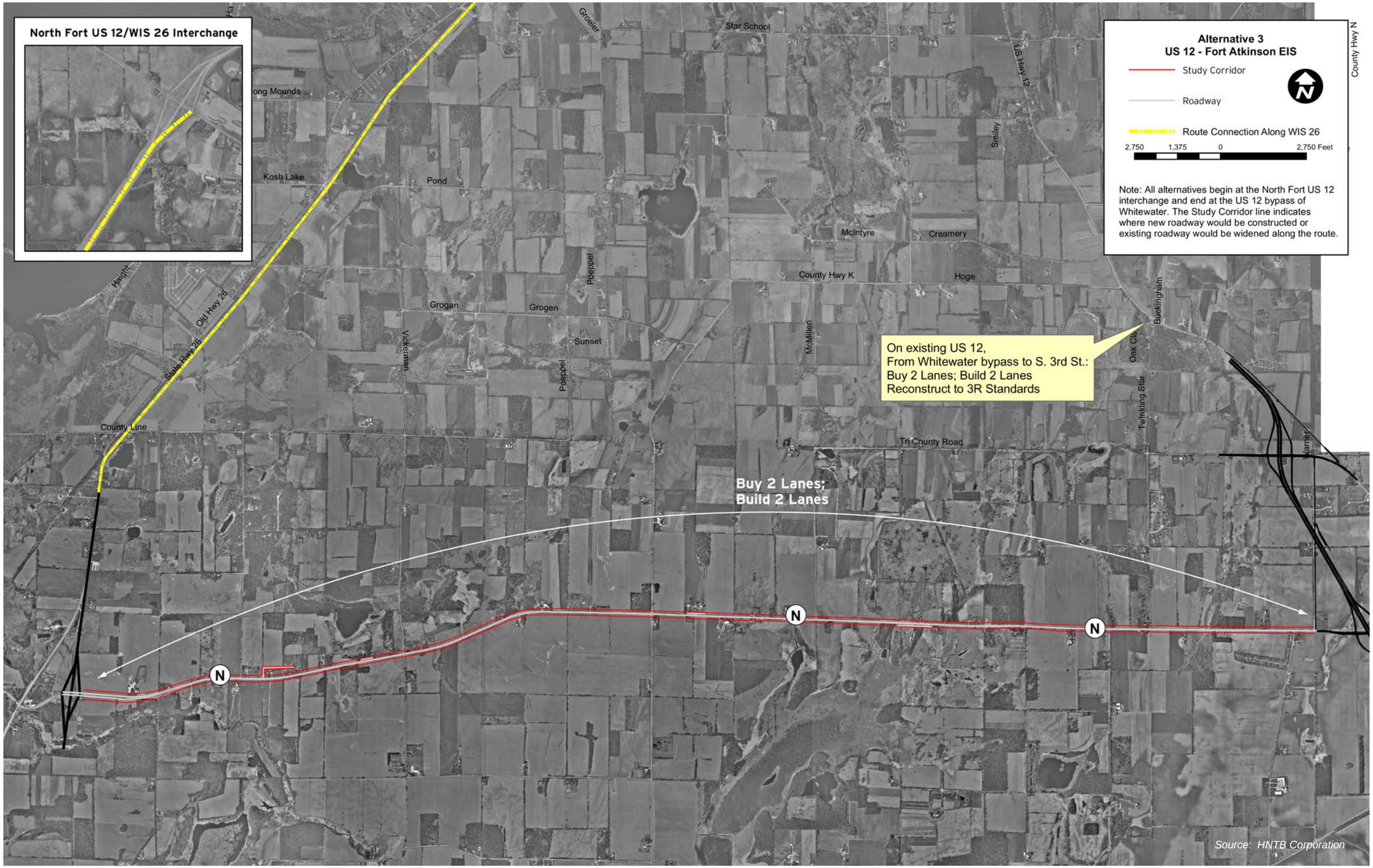
Source: HNTB Corporation

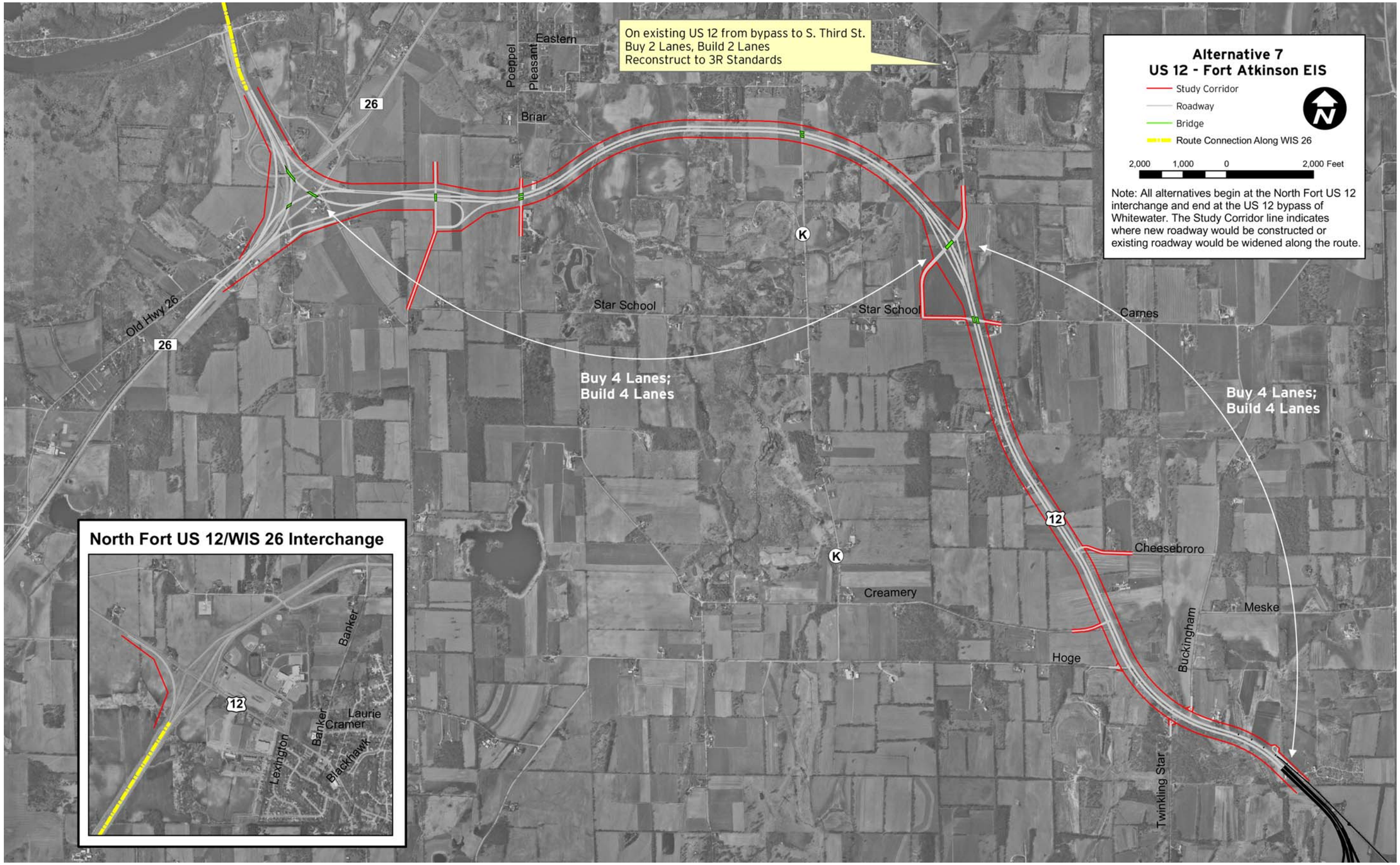
Figure 15: Alternative 2b Robert Street Typical Sections



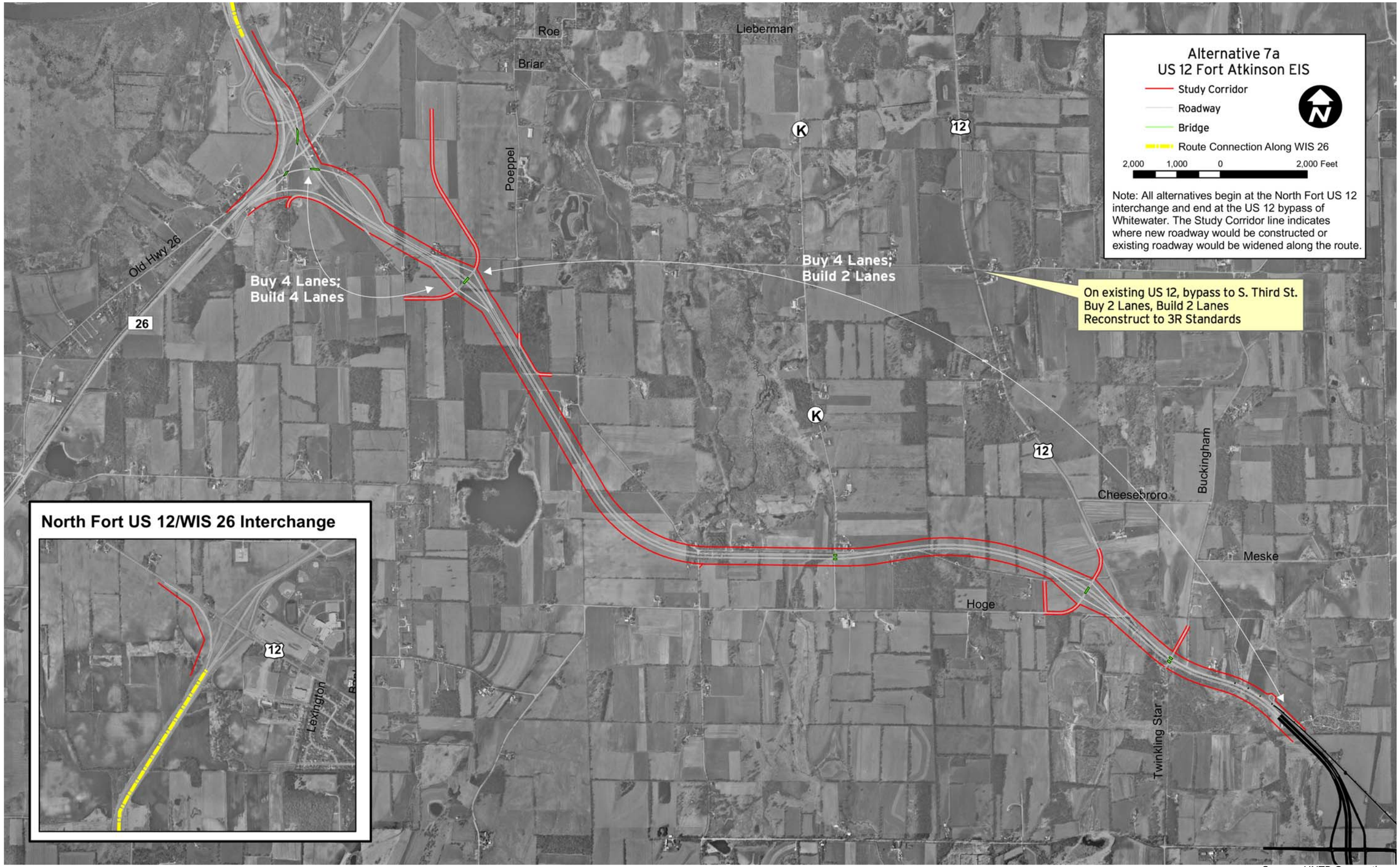
Source: HNTB Corporation

Figure 16: Alternative 2b Typical Sections Along Whitewater Avenue


North Fort US 12/WIS 26 Interchange
Alternative 3
US 12 - Fort Atkinson EIS
Study Corridor
Roadway
Route Connection Along WIS 26
2,750 1,375 0 2,750 Feet
Note: All alternatives begin at the North Fort US 12 interchange and end at the US 12 bypass of Whitewater. The Study Corridor line indicates where new roadway would be constructed or existing roadway would be widened along the route.
On existing US 12,
From Whitewater bypass to S. 3rd St.:
Buy 2 Lanes; Build 2 Lanes
Reconstruct to 3R Standards
Buy 2 Lanes;
Build 2 Lanes
Star School
Groelle
Kosh Lake
Pond
McIntyre
Creamery
Hoge
County Hwy K
Grogan
Grogen
Sunset
Vickerman
Peepdel
McMillen
Buckingham
Twinkling Star
Tri County Road
County Line
Old Hwy 26
State Hwy 26
US Hwy 12
Smiley
County Hwy N
N
Source: HNTB Corporation



Source: HNTB Corporation



Source: HNTB Corporation

⇦ BACK NEXT ⇨

5. Traffic Summary

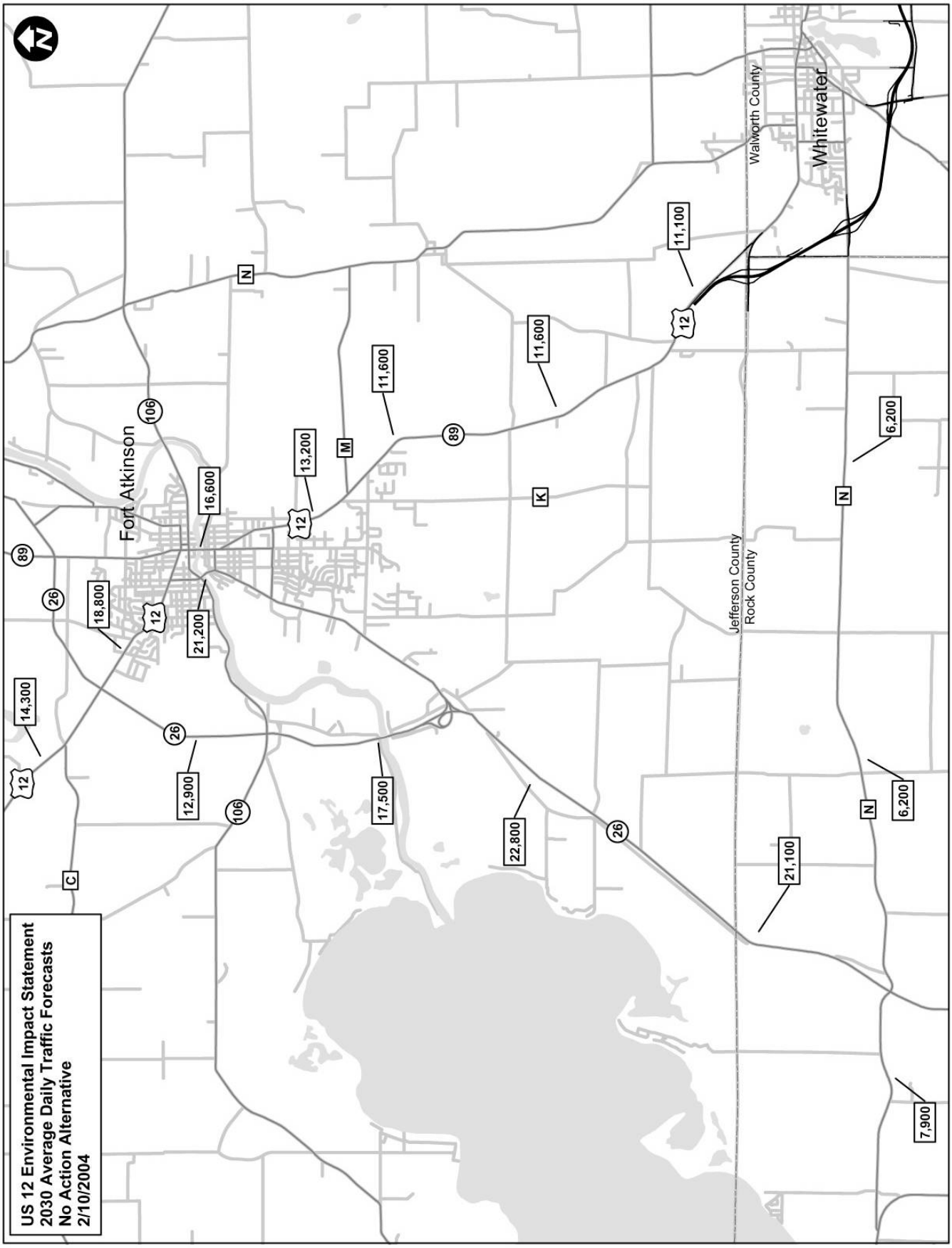
Table 9: Traffic Summary

	SEGMENT TERMINI	**Alt 1 No Build**					**Alt 1a TSM**					**Alt 2b One-way Pair**					**Alt 3 CTH N**	**Alt 7 South Bypass**		**Alt 7a South Bypass Wetland Avoidance**	
		Madison Ave. (WIS 26 to Banker Rd.)	Robert St. Bridge (Riverside Dr. to S. Third)	Main St. Bridge (N. Third St. to S. Third St.)	Whitewater Ave. (Rockwell Ave. to CTH M)	Whitewater Ave. (South of CTH M)	Madison Ave. (WIS 26 to Banker Rd.)	Robert St. Bridge (Riverside Dr. to S. Third)	Main St. Bridge (N. Third St. to S. Third St.)	Whitewater Ave. (Rockwell Ave. to CTH M)	Whitewater Ave. (South of CTH M)	Madison Ave. (WIS 26 to Banker Rd.)	Robert St. Bridge (Riverside Dr. to S. Third)	Main St. Bridge (N. Third St. to S. Third St.)	Whitewater Ave. (Rockwell Ave. to CTH M)	Whitewater Ave. (South of CTH M)	Rock CTH N to WIS 26	WIS 26 to Commerce Parkway	Commerce Parkway to US 12	WIS 26 to Commerce Parkway	Commerce Parkway to US 12
TRAFFIC VOLUMES Existing	**ADT Yr. 2000**	13,400 vpd	14,300 vpd	15,000 vpd	8,600 vpd	6,900 vpd	13,400 vpd	14,300 vpd	15,000 vpd	8,600 vpd	6,900 vpd	13,400 vpd	14,300 vpd	15,000 vpd	8,600 vpd	6,900 vpd	3,800	n/a	n/a	n/a	n/a
Const. Year	**ADT Yr. 2010**	15,000 vpd	16,300 vpd	15,500 vpd	9,900 vpd	8,200 vpd	15,000 vpd	16,300 vpd	15,500 vpd	9,900 vpd	8,200 vpd	15,200 vpd	15,600 vpd	16,000 vpd	9,900 vpd	8,200 vpd	4,800 vpd	9,400 vpd	5,000 vpd	9,400 vpd	5,000 vpd
Const. Plus 10 Yr.	**ADT Yr. 2020**	16,800 vpd	18,600 vpd	16,000 vpd	11,400 vpd	9,800 vpd	16,800 vpd	18,600 vpd	16,000 vpd	11,400 vpd	9,800 vpd	17,300 vpd	16,900 vpd	17,100 vpd	11,300 vpd	9,800 vpd	6,100 vpd	11,800 vpd	5,800 vpd	10,800 vpd	5,800 vpd
Design Year	**ADT Yr. 2030**	18,800 vpd	21,200 vpd	16,600 vpd	13,200 vpd	11,600 vpd	18,800 vpd	21,200 vpd	16,600 vpd	13,200 vpd	11,600 vpd	19,700 vpd	18,400 vpd	18,200 vpd	13,000 vpd	11,600 vpd	7,800 vpd	14,800 vpd	6,700 vpd	12,400 vpd	5,000 vpd
	DHV Yr. 2030	2,105 vph	1,740 vph	1,345 vph	1,240 vph	1,090 vph	2,105 vph	1,740 vph	1,345 vph	1,240 vph	1,090 vph	2,205 vph	1,510 vph	1,475 vph	1,220 vph	1,090 vph	780 vph	1585 vph	715 vph	1325 vph	535 vph
TRAFFIC FACTORS	**K ($_{30, 100,}$ or %)**	11.2%	8.2%	8.1%	9.4%	9.4%	11.2%	8.2%	8.1%	9.4%	9.4%	11.2%	8.2%	8.1%	9.4%	9.4%	10.0%	10.7%	10.7%	10.7%	10.7%
Design Year	**D (%)**	55/45	62/38	53/47	50/50	50/50	55/45	62/38	53/47	50/50	50/50	55/45	n/a	n/a	50/50	50/50	50/50	50/50	50/50	50/50	50/50
	T (% of ADT)	3%	2%	4%	8%	9%	3%	2%	4%	8%	9%	3%	3%	3%	8%	9%	4%	6%	15%	6%	15%
	T (% of DHV)	2%	1%	3%	5%	6%	2%	1%	3%	5%	6%	2%	2%	2%	5%	6%	3%	4%	10%	4%	10%
	Level of Service	C	D	D	D	D	B	C	D	D	D	B	C	C	C	A	A	A	A	A	A
SPEEDS Existing	**Posted**	35-45	25	25	30-50	55	35-45	25	25	30-50	55	35-45	25	25	30-50	55	55 mph	55 mph	n/a	n/a	n/a
Design Year	**Posted**	35-45	25	25	30-50	55	35-45	25	25	30-50	55	35-45	25	25	30-50	55	55 mph	55 mph	55 mph	55 mph	55 mph
	Project Design Speed	40-50	30	30	35-55	60	40-50	30	30	35-55	60	40-50	30	30	35-55	60	60 mph	70 mph	70 mph	70 mph	70 mph

ADT = Average Daily Traffic DHV = Design Hourly Volume $K_{30,100}$ or % = K_{30} = Rural, K_{100} = Urban, % = ADT in DHV D = % DHV in predominate direction of travel T = Trucks

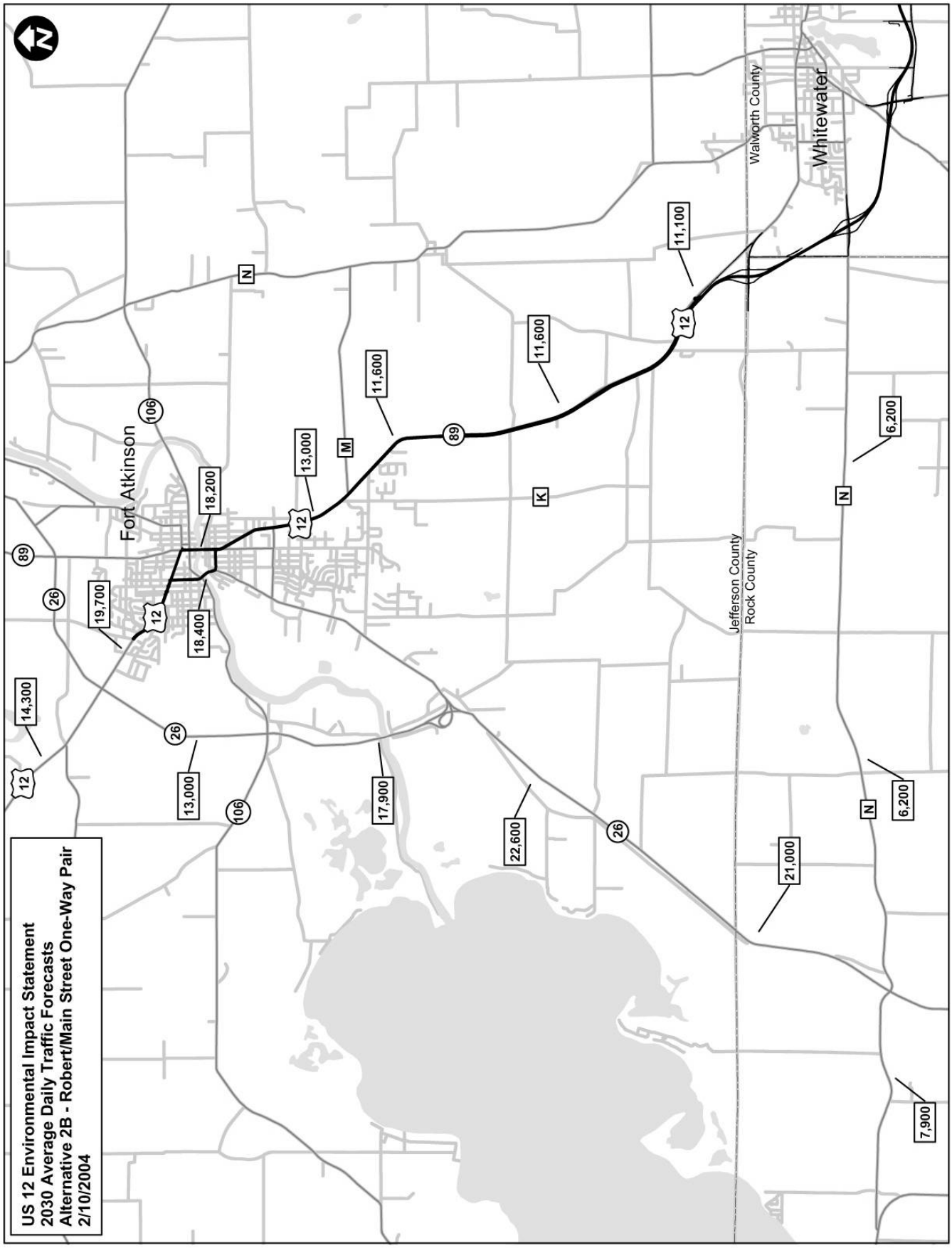
NOTES:
LOS for Madison Ave., Robert St., Main St. and Whitewater Ave. (Rockwell Ave. to CTH M) are from SYNCHRO Analysis.
Existing ADT data are from the publication *Wisconsin Highway Traffic Volume Data 2001* Division of Transportation Investment Management Bureau of Highway Programs Data Management prepared in Cooperation with U.S. Department of Transportation and Federal Highway Administration. May 2002.

⇦ BACK NEXT ⇨

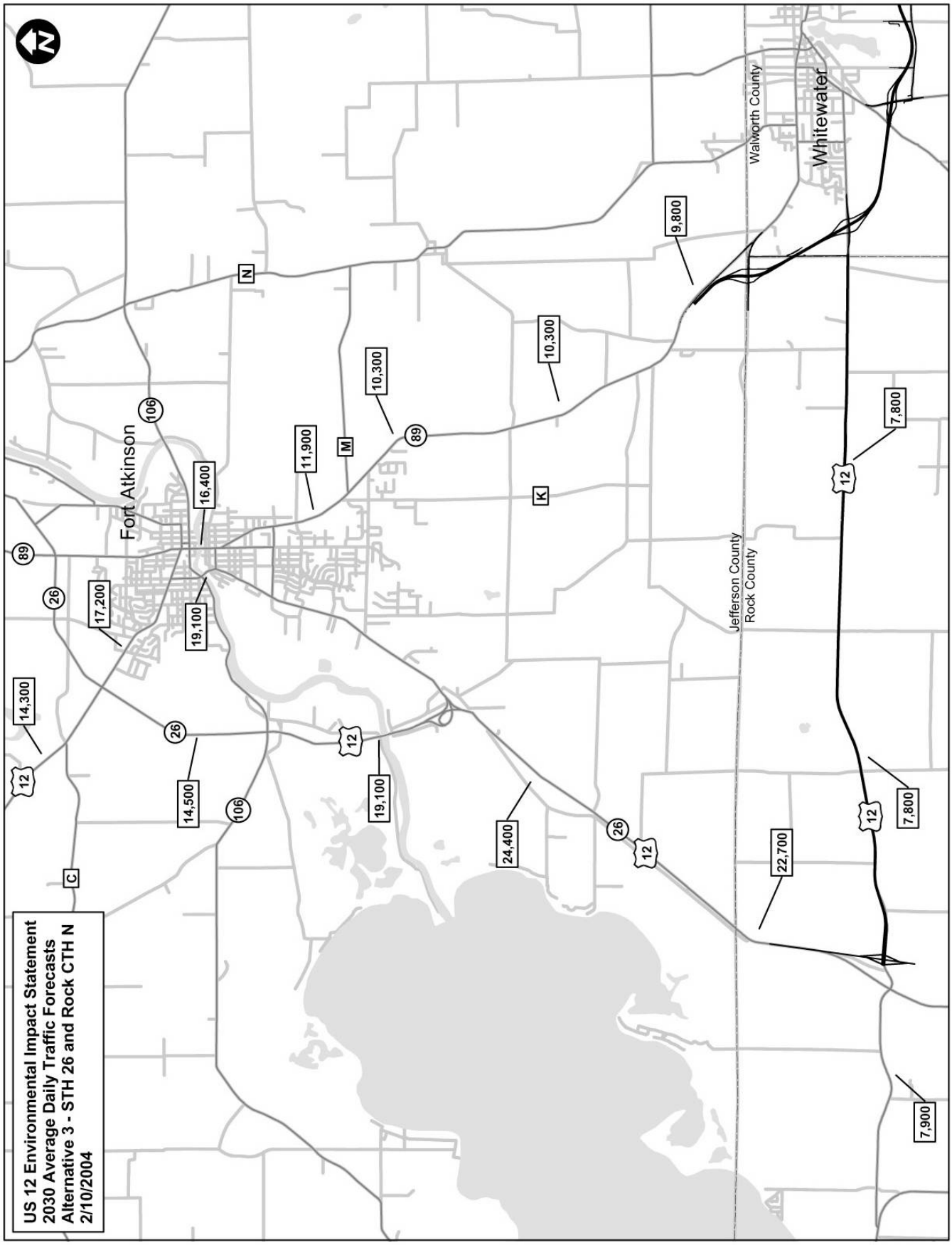


Source: HNTB Corporation

Figure 20: 2030 ADT – Alternative 1 (No Action)

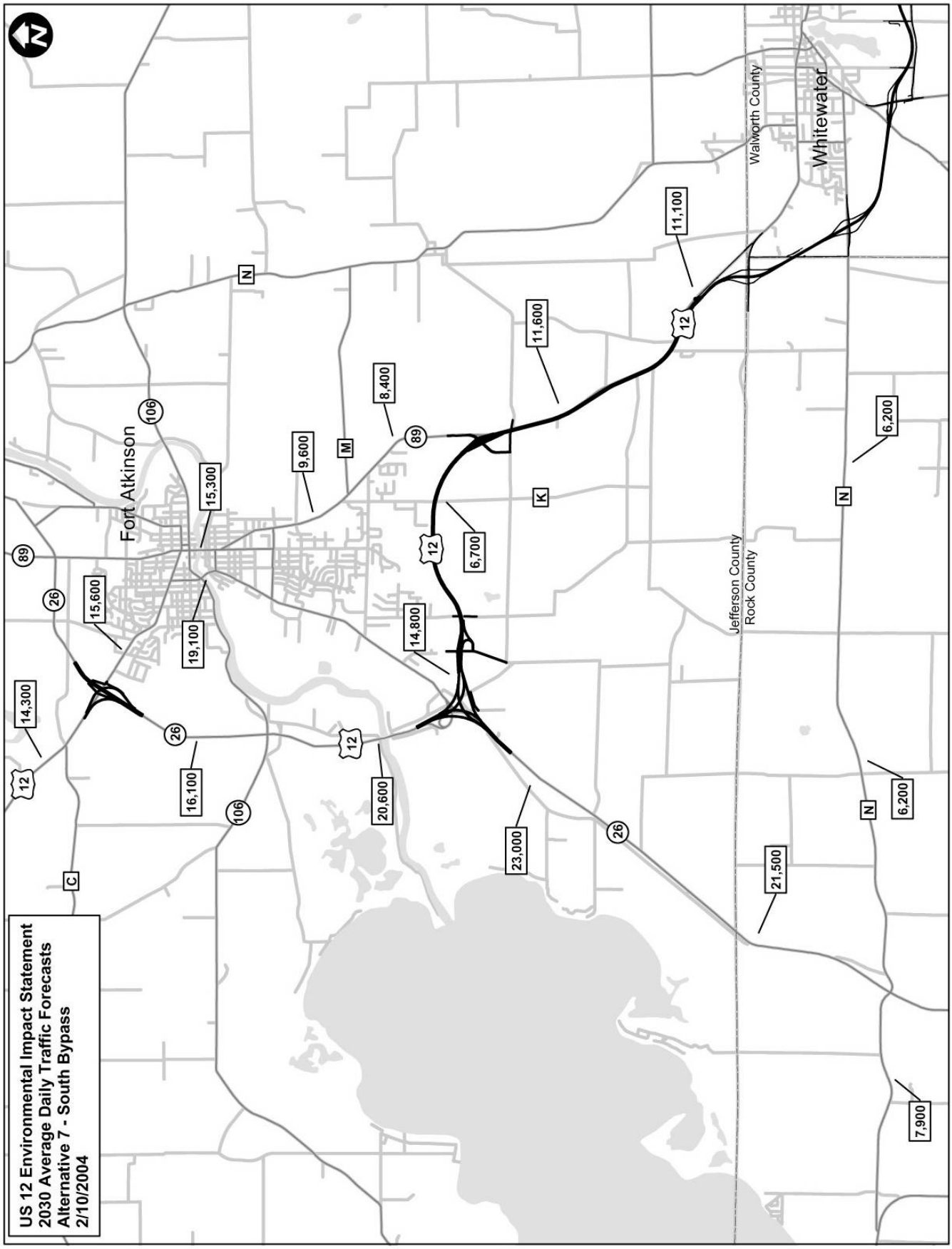


Source: HNTB Corporation

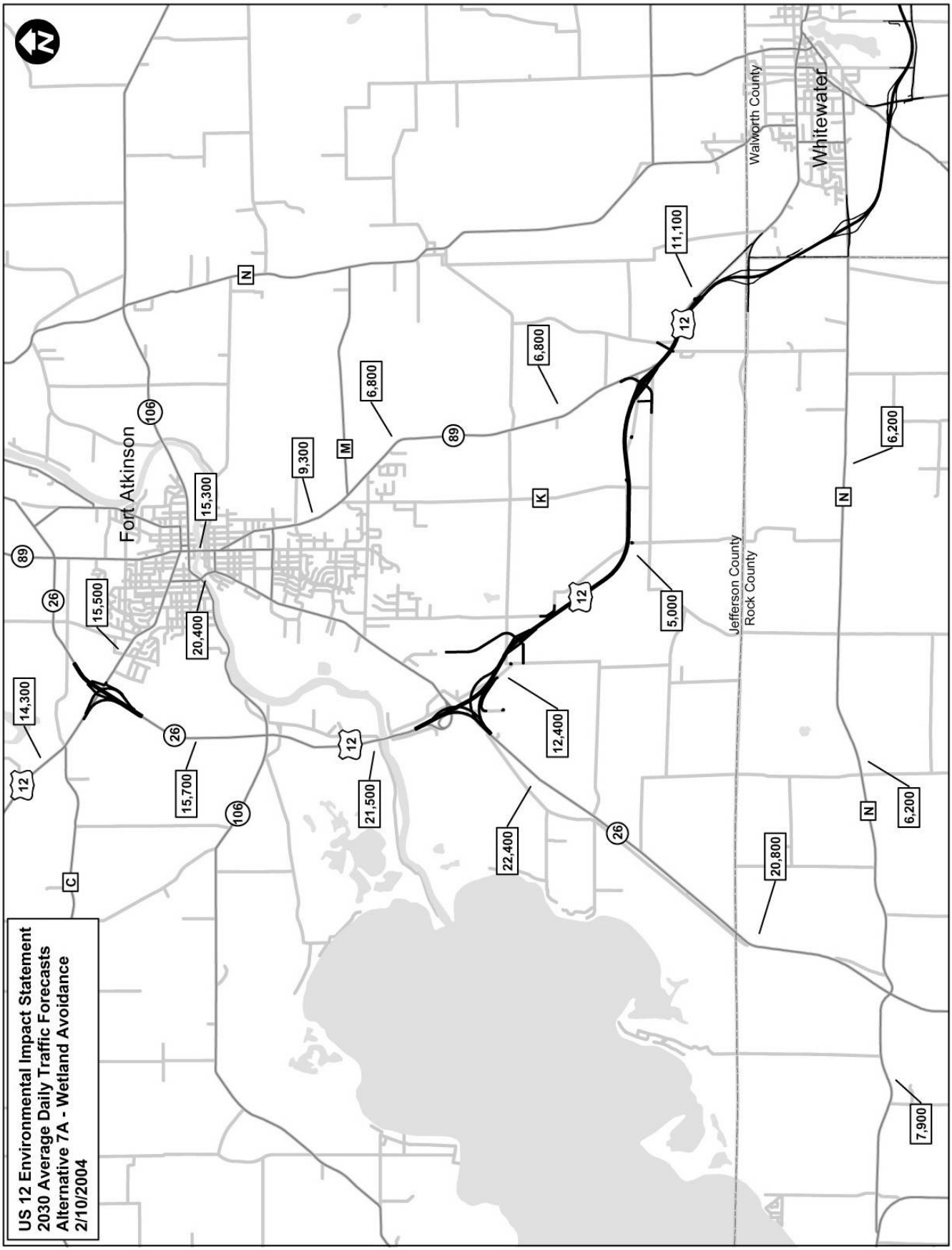


Source: HNTB Corporation

Figure 22: 2030 ADT Forecasts – Alternative 3



Source: HNTB Corporation



Source: HNTB Corporation

Figure 24: 2030 ADT – Alternative 7a

6. Land Use

1) Describe existing land use (attach land use maps if available)

See Figure 9 on page 22 for a map of the existing and proposed land uses.

a) Land use in immediate area.

In general, all the build alternatives are located in agricultural and rural residential areas.

Alternatives 1, 1a and 2b remain on the existing alignment, which also travels through urbanized Fort Atkinson and encounters land uses of all kinds including residential, commercial, industrial, agricultural and open space consisting of uplands, woodlands and wetlands.

b) Land use in area surrounding project area.

Surrounding areas are also as described in question 1(a), above.

7. Compatibility with Adopted Plans

1) Briefly identify adopted plans for the area and discuss whether the proposed action is compatible with the plan. (For example, the following may be considered: Regional Planning Commission Plans, Transportation Improvement Program, State Transportation Improvement Plan, Local zoning and land use plans, DOT Storm Water Management Plans, Others.)

In the table below, the box is marked if alternatives are incompatible with the noted plan.

Table 10: Summary of Compatibility with Adopted Plans

Plan Name/Date	Alternative 1	Alternative 1a	Alternative 2b	Alternative 3	Alternative 7	Alternative 7a	Discussion
	"X" = INCOMPATIBLE						
Fort Atkinson Master Plan Update 1997	X	X	X	X			An alignment similar to Alternative 7 is presented in the Master Plan as a future bypass of Fort Atkinson. The area where the existing industrial park is now located was planned to accommodate industrial and economic development based on the limited availability of suitable areas elsewhere. The business park site was selected because of its potential direct access to "the southern Highway 12 bypass".
Fort Atkinson Downtown Plan	X		X	X			Downtown streetscape improvements are proposed on North and South Main Street including, historic street lighting, red brick paver strips, street trees and tree grates, and crosswalk striping. One objective that the City has is to control through-traffic, particularly truck traffic, on Main Street and provide safe and efficient pedestrian and bicycle circulation. The through-city alternative (Alt. 2b) does not increase controls on regional traffic, but may move it through quicker and more safely for vehicles. Pedestrian safety would potentially be degraded to some extent due to increased potential for speed, which could occur since the vehicles would not be so cramped in their lanes.
Fort Atkinson NW Quadrant Plan – 2002							Changes in the WIS 26 interchange associated with Alternatives 7 and 7a in Fort Atkinson's northwest quadrant would not conflict with Fort Atkinson's land use plans in this area.
Town of Koshkonong Land Use Plan – 1996					X	X	The Town of Koshkonong Plan explicitly does not recognize the need for a bypass of Fort Atkinson. A bypass on new alignment would sever farmland and take tillable acreage out of production, which is contrary to the Town's Agricultural Preservation goals.

Plan Name/Date	Alternative 1	Alternative 1a	Alternative 2b	Alternative 3	Alternative 7	Alternative 7a	Discussion
	"X" = INCOMPATIBLE						
Town of Koshkonong Comprehensive Park and Outdoor Recreation Plan (March 2004)					X	X	None of the alternatives would use parkland from any existing or proposed Town Parks. Alternatives 7 and 7a would conflict with future bike route plans which call for designated bike routes along Poeppel, McIntyre and Creamery Roads.
Town of Milton – 2001				X			Land Use in the Alternative 3 study corridor is designated Exclusive Agriculture. Widening of the road would result in negative impacts to farmland because of strip acquisitions from farmland and access control, which could impede access for some farmers.
Town of Lima – 1979				X			Land Use in the Alternative 3 study corridor is designated Exclusive Agriculture. Widening of the road would result in negative impacts to farmland because of strip acquisitions from farmland and access control, which could impede access for some farmers.
Jefferson County Agricultural Preservation and Land Use Plan - 1999					X	X	Agricultural Preservation Areas in the Town of Koshkonong would be affected by the bypass options. It is the county's policy to minimize non-agricultural development on prime agricultural soils although there is no specific policy toward road building. The Plan's environmental corridor policy is that road construction associated with non-agricultural development should be prohibited on slopes in excess of 20%. A potential bypass similar to Alternative 7 is indicated in the document's Transportation Plan and maps. The Bikeway and Pedestrian-way Plan identifies the Glacial River Trail as a key multiuse trail. This trail would be temporarily impacted with either Alternative 7 or Alternative 7a because it would need to be relocated.
Jefferson County Bikeway/Pedestrian way Plan – 1996					X	X	Alternative 7a affects the planned bicycle route to connect Fort Atkinson with Walworth County along town roads. Glacier Creek trail would need to be relocated in the vicinity of the WIS 26/US 12 interchange southwest of Fort Atkinson for Alternatives 7 and 7a.
National Highway System Planning (Subchapter E Part 470, Subpart A – Federal-Aid Highway Systems)	X	X		X			A NHS route shall serve major population centers, and serve interstate and interregional travel. Proposed additions to the NHS should connect at each end with other routes on the NHS.

Plan Name/Date	Alternative 1	Alternative 1a	Alternative 2b	Alternative 3	Alternative 7	Alternative 7a	Discussion
	"X" = INCOMPATIBLE						
Corridors 2020 Wisconsin's Connections to the 21st Century and Corridors 2020 Review and Update June 1994	X	X	X	X			US 12 is designated a Connector route and so must connect trade centers and provide connections to the Backbone routes in the State. All the alternatives continue to connect to Fort Atkinson and Jefferson County. But, Alternative 3 increases the distance from Whitewater to Fort Atkinson. Alternatives 1 and 2b do not separate regional traffic from local traffic.
Wisconsin State Highway Plan 2020	X	X		X			A US 12 project was listed as a candidate "Major Project" in 1997. The State Highway Plan identifies several Major Projects that include highway projects that can result in capacity expansion. The US 12 Fort Atkinson project was approved for study in 1998 based on traffic conditions and the fact that all US 12 and WIS 89 regional traffic had to pass through Fort Atkinson.
Wisconsin Bicycle Transportation Plan 2020	X						The goals of the Bicycle Plan are to increase levels of bicycling throughout Wisconsin, doubling the number of trips by 2010 and reducing crashes involving bicyclists and motor vehicles by at least 10% by 2010. New transportation facilities are to be planned and designed to accommodate bicyclists and encourage their use. The bypass alternatives 7 and 7a would increase safety and decrease congestion on local roads within Fort Atkinson by removing much of the regional traffic. Alternative 7 and 7a do not include bike lanes, which would be inappropriate for such a facility. The Glacial River Trail that lies within the interchange of WIS 26 and the bypass alternatives would be altered, but maintained. Alternative 7a would alter Rustic Road #87 thereby eliminating one recreational bicycle route. Doing nothing would not increase bicycle safety within Fort Atkinson or on the rural portions of US 12.
Translinks 21 (1995)	X						US 12 is identified by WisDOT as a Connector with congestion problems. It is part of a network of key two-and multi-lane state and interstate highways connecting all communities over 5,000 population. The Connector network connects key communities with the Backbone system. See also Corridors 2020 and Wisconsin State Highway Plan discussions above, which are plan elements that resulted from the Translinks 21 Plan.

B. ENVIRONMENTAL CONSEQUENCES

1. Environmental Issues

1) Indicate whether the issue listed below is a concern for the proposed action. If the issue is a concern, explain how that concern is to be addressed or where the issue is addressed in this environmental document.

a) Stimulation of secondary environmental effects.

☐ **No - Substantial secondary environmental effects will not be stimulated.**
☒ **Yes - Stimulation of substantial secondary environmental effects will occur. Explain or indicate where addressed.**

Alternatives 7 and 7a may stimulate new development south of Fort Atkinson, especially near the interchanges. See Appendix D: Secondary and Cumulative Impacts Report.

A bypass may improve the economy by creating better access to employment and increased efficiencies in hauling goods. An improved economy may increase demand for other land uses including residential, commercial, park and recreation, and civic and institutional. This could have both beneficial as well as adverse impacts.

A US 12 bypass of Fort Atkinson could encourage expansion of the industrial park, with Alternative 7 allowing already planned development to extend beyond the bypass. Alternative 7a coincides better with the Urban Service Area boundary near the industrial park. The Urban Service Area boundary is shown on maps located in the Secondary and Cumulative Impacts Report.

There was public comment that a bypass may eventually create a local desire to bypass Cambridge, as it would become the only community along US 12 not bypassed between Whitewater and Madison.

b) Creation of a new environmental effect.

☒ **No - A new environmental effect will not be created.**
☐ **Yes - The project will create a new environmental effect. Explain or indicate where addressed.**

c) Impacts on geographically scarce resources.

☒ **No - Geographically scarce resources will not be impacted.**
☐ **Yes - Impacts on geographically scarce resources will occur. Explain or indicate where addressed.**

d) Precedent-setting nature of the proposed action.

☒ **No - The proposed project does not have a precedent-setting nature.**
☐ **Yes - The proposed project has a precedent-setting nature. Explain or indicate where addressed.**

e) The degree of controversy associated with the proposed action.

☐ **No - The proposed action is not controversial or the level of controversy is low.**
☒ **Yes - The project has a high degree of controversy. Explain or indicate where addressed.**

A telephone survey of the residents in the Town of Koshkonong and Fort Atkinson, conducted by St. Norbert Survey Center as a part of the Needs Assessment Study, indicated residents had a high degree of concern with existing US 12 through the City of Fort Atkinson. Results of this survey are contained in their report, which states that overall, respondents overwhelmingly felt that US 12 presented serious problems

regarding safety issues, congestion, and heavy truck usage and that overall safety conditions, traffic congestion, access to schools and work had deteriorated along US 12 over the last five years.17

The Friends of Koshkonong group and the Koshkonong Town Board have issued Resolutions stating that they felt a bypass was not warranted and that an Alternative using Rock County N would be more appropriate. See Resolution in Appendix F. In response the Boards of Lima, Milton and the Rock County Planning and Development Committee of the Rock County Board of Supervisors adopted resolutions stating that they were not in support of Alternative 3. In addition the Rock County Land Conservation and Agricultural Committee of the Rock County Board of Supervisors are also on record in opposition to Alternative 3. None of these groups indicated that the No Action alternative was preferred over other alternatives.

The Fort Atkinson Chamber of Commerce has expressed interest in eliminating the mix of traffic downtown because they feel that the regional traffic including semi-trucks and regional travelers do not contribute to their customer base, but they do interfere with the local traffic and destination shoppers.

The Fort Atkinson Industrial Development Corporation has also indicated their desire to have improved US 12 access to their business park on the southwest side of Fort Atkinson.

f) Conflicts with official agency plans or local, state, or national policies, including conflicts resulting from potential effects of transportation on land use and land use on transportation demand.

☐ **No - No conflicts with any plans, policies, or land uses will result.**
☒ **Yes - Conflicts with plans, policies or land uses will result. Explain or indicate where addressed.**

The City of Fort Atkinson and the City of Fort Atkinson Industrial Development Corporation has planned to provide access to a future US 12 bypass south of the city, as evidenced by the layout of roads in the Robert L. Klement Business Park on the southwest side of Fort Atkinson and as offered in their advertisements to prospective businesses. Likewise the City of Fort Atkinson and Jefferson County have both planned their future land use plans on the presence of a bypass similar to Alternative 7.

The Town of Koshkonong Town Plan does not recognize the need for a bypass such as proposed with Alternatives 7 and 7a.

g) Cumulative environmental impacts of repeated actions of the type proposed.

☐ **No - The proposed action will not contribute to cumulative environmental impacts of repeated actions.**
☒ **Yes - Cumulative environmental impacts will result from repeated actions of the type proposed. Explain or indicate where addressed.**

See Appendix D: Secondary and Cumulative Impacts Report.

For the No Action alternative and the TSM alternative, as traffic volumes increase on the US Highway System, increased congestion in Fort Atkinson and other similar communities would generally contribute to the cumulative effects of increased air pollution, increased crashes and related lost productivity.

For the bypass alternatives, a bypass may eventually create a desire to bypass Cambridge, as it would become the only community along US 12 not bypassed between Whitewater and Madison.

There would be cumulative impacts to loss of wetland acreage and wetland fragmentation, loss of woodland and plant and animal habitat acreage and fragmentation. Under a cooperative agreement the WisDOT and the DNR agree to consult and cooperate with each other on all projects such that each agency can accomplish its assigned statutory responsibilities while assuring at the same time adverse

[17] St. Norbert College Survey Center (2001) *US Highway 12 Needs Assessment Study Final Report* Prepared for the Wisconsin Department of Transportation and HNTB Corporation.

effects on Wisconsin's land, water, fish, and wildlife resources are minimized to the fullest extent practicable under law. Under this agreement, critical resources would be avoided, where possible, during alignment location studies. If avoidance is not feasible, impacts to critical resources are to be minimized. Unavoidable impacts would be mitigated. Under the cooperative agreement, cumulative losses of resources are minimized.

Additional farmland would be removed from production, which is a regional and national problem. Once land is converted to developed uses, it is taken out of production and not likely to revert back.

New road construction would use non-renewable construction materials through sand and gravel mining.

New roads would create additional impervious surfaces with the potential to affect water quality by producing highway runoff, and pre-and post-construction sediments. Wear from vehicle tires, engine and body parts, spills of oil and gasoline, road salt and/or deicing agents will also accumulate.

As other US 12 communities are bypassed, and as US 12 has fewer and fewer access points it could result in easier regional travel and make US 12 a more desirable alternative to the interstate. This could in turn cause an increase in heavy truck traffic and other regional automobile traffic.

Bypasses can contribute to a continued loss of rural character.

Continued improvements to the highway system make it more efficient and could influence how travelers choose to use the system. The improved transportation facilities may contribute to creating travel demand as investigated in *The Impacts of Highway Facility Improvements On Travel and Regional Development - Wisconsin TransLinks 21 (January 1994).*

h) Foreclosure of future options.

☒ **No - The proposed action will not foreclose future options. That is, the proposal will not require or preclude alternative transportation improvements.**
☐ **Yes - The proposed action will foreclose future options. That is, other transportation improvements will be required or alternatives for future improvements are precluded. Explain or indicate where addressed.**

i) Direct or indirect impacts on minority groups.

☒ **No - Neither direct nor indirect impacts on minority groups will occur.**
☐ **Yes - Either direct or indirect impacts on minority groups will occur. Explain or indicate where addressed.**

j) Disproportionately high and adverse effects on minority population or low-income populations

☒ **No - Disproportionately high and adverse effects on a minority population or low-income populations will not occur**
☐ **Yes - A minority population or low-income population will experience disproportionately high and adverse effects. Explain or indicate where addressed.**

2. Summary Table of Environmental Impacts of All Alternatives

PLEASE READ THIS → Calculations of the potential impacts were based on a study corridor width of 400 feet for the areas that would require 4-lanes and 200 feet for Alternative 3, which would remain a two-lane highway. For Alternative 2b, the nature of the alternative is to avoid acquisition of as much right-of-way as possible and to remain on the current alignment therefore the study corridor is narrow downtown to include only the right-of-way that is anticipated to be needed. In this way, each alternative can be fairly compared. In addition, the maximum impact that would likely occur is indicated. It is likely that for most impacted areas such as wetlands, woodlands, historic districts and relocations, minimization of effects would occur as roadway design is refined.

In the study corridor, WIS 89 runs along US 12 from the intersection of Main and Madison, south along Main Street through Fort Atkinson and continues on US 12 to the Whitewater Bypass. Improvements will eventually be needed to WIS 89. Each alternative leaves a different length of WIS 89 remaining. For example, Alternative 3 would leave the entire length of WIS 89 in the project area out of the project. Alternative 7 would leave the portion between the new bypass and Fort Atkinson and Alternative 2b would improve the entire length of WIS 89. Improvements to WIS 89 would be made using Existing Highway Improvement program funding for resurfacing, reconditioning, and reconstruction of the non-interstate portion of the state trunk highway system (3R funds). Any improvements to WIS 89 will require a separate environmental review. Alternatives 3, 7 and 7a will also require jurisdictional transfer of US 12 along Robert Street and South Third Street from Madison Avenue to Main Street and Madison Avenue from Main Street to the northwest Fort Atkinson interchange. Costs of the jurisdictional transfer will be associated with necessary minor reconditioning of Robert Street and South Third Street.

Table 11: Environmental Matrix for All Alternatives

Environmental Issue	Unit Measure	Alt 1 No Action	Alt 1a TSM	Alt 2b Through -city	Alt 3 CTH N	Alt 7 Near South Bypass	Alt 7a South Bypass
Project Length							
Length to be constructed including the mainline plus ramps and other new roads not including length of WIS 89	Mi (km)	0	6.2 (10.0)	7.1 (11.4)	8.3 (13.4)	13.7 (22.0)	12.9 (20.8)
Travel distance between CTH S interchange of Whitewater Bypass and WIS 26 interchange northwest of Fort Atkinson	Mi (km)	10.1 (16.3)	10.1 (16.3)	10.1 (16.3)	17.5 (28.2)	11.9 (19.2)	11.3 (18.2)
Length of WIS 89 remaining to be reconstructed	Mi (km)	0	0	0	6.2 (10.0)	3.0 (4.8)	5.5 (8.9)
Cost							
Construction	Million $	0	5.0	16.0	11.0	32.0	26.0
Real Estate	Million $	0	<0.1	6.8	2.8	7.5	5.6
Relocation Estimate (2003 $)	Million $	0	0	1.9	1.1	1.7	1.2
Bypass Interchange @ US 12/County Line Road	Million $	0	0	4.3	0	4.3	4.3
Jurisdictional Transfer Costs	Million $	0	0	0	1.3	1.3	1.3
Total US 12 Project Costs	Million $	0	*5.1*	*29.0*	*16.2*	*46.8*	*38.4*
WIS 89 Remaining 3R improvement construction	Million $	0	0	0	9.0	5.0	8.0
Total US 12 Costs plus WIS 89 Costs	*Million$*	*0*	*5.1*	*29.8*	*23.9*	*50.5*	*45.1*

Environmental Issue	Unit Measure	Alt 1 No Action	Alt 1a TSM	Alt 2b Through -city	Alt 3 CTH N	Alt 7 Near South Bypass	Alt 7a South Bypass
Land Conversions to Right of Way							
Total Area	Acres (Hectares)	0	0	161 (65)	94 (38)	351 (142)	298 (121)
Wetland Area	Acres (Hectares)	0	0	2 (<1)	2 (<1)	12 (5)	1 (<1)
Upland Area (Woodland)	Acres (Hectares)	0	0	11 (4)	0	19 (8)	21 (8)
Other Area: Including Multi- and Single Family Residential, Commercial, Industrial, Landfill, Open Space/Vacant, Public/Quasi-Public, Surface Water, and Transportation	Acres (Hectares)	0	0	60 (24)	9 (4)	63 (25)	30 (12)
Real Estate							
Number of Farms Affected	Number	0	0	17	37	20	20
Agricultural area	Acres (Hectares)	0	0	88 (36)	83 (34)	257 (104)	247 (100)
Farm Unit Relocations	Number	0	0	1	2	1	2
Residential Unit Relocations	Number	0	0	41	14	32	25
Business Unit Relocations	Number	0	0	4	2	1	1
Environmental Issues							
In Floodplain?	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
Affected Stream Crossings	Number	0	0	1	1	2	2
Endangered Species Habitat?	Yes/No	No	No	No	Yes	Yes	Yes
Historic Sites/Districts identified	Number	6	6	6	2	0	0
Archeological Sites Identified	Number	0	0	4	6	1	3
Sec. 106 MOA Required?	Yes/No	Not Deter-mined	Not Deter-mined	Not Deter-mined	Not Deter-mined	Not Deter-mined	Not Deter-mined
Sec. 4(f) Evaluation Required?	Yes/No	Not Deter-mined	Not Deter-mined	Not Deter-mined	Not Deter-mined	Not Deter-mined	Not Deter-mined
Environ Justice At Issue?	Yes/No	No	No	No	No	No	No
Air Quality Permit?	Yes/No	No	No	No	No	No	No
Design Year Noise Sensitive Receptors Impacted Exceed dBa Levels	Number Number	86 10**	86 10**	86 10**	62 7**/2	15 3**/3	15 3**/2
Contaminated Sites identified	Number	79	79	79	6	2	3
Indirect & Cumulative Impacts	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes

**existing units on US 12

3. Environmental Matrix

This matrix was completed for each Alternative retained for detailed study

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	Not Applicable	(Blacked out cells require a check in at least one of the other columns COMMENTS
SOCIO-ECONOMIC FACTORS					
General Economics					*Factor Sheet completed – see page 72.*
No Action, Alternative 1a – TSM	X				Congestion and crashes can be expected to affect the mobility of US 12, a Corridors 2020 Connector Route. This can be expected to affect the State's general economy as it is designated a long truck route and is a part of the National Highway System. Fort Atkinson and Jefferson County are considered to be important to the State's economy as they are listed in the State Plan as important trade and manufacturing centers.
Alternative 2b – One-way Pair	X				This alternative is not expected to remove regional traffic, including semi truck traffic, through Fort Atkinson, which Fort Atkinson expects would help make the downtown more pedestrian and shopper friendly.
Alternative 3 – Rock County N	X				Since this alternative is not expected to substantially remove regional traffic through Fort Atkinson, continued congestion and crashes can be expected to affect the mobility of WIS 89 through the City of Fort Atkinson, which runs concurrently with US 12 from Whitewater to Madison Avenue, along Whitewater Avenue and Main Street. This can be expected to affect the State's general economy since Fort Atkinson is considered to be important to the State's economy as an important trade and manufacturing center.
Alternative 7 – South Bypass and Alternative 7a – Far South Bypass	X	X			Increased mobility of this Corridors 2020 Connector Route can be expected to positively affect the State's general economy as US 12 is designated a long truck route and is a part of the National Highway System. Fort Atkinson and Jefferson County are considered to be important to the State's economy as they are listed in the State Plan as important trade and manufacturing centers. Impacts can be expected from farm severances (see Agriculture)

ENVIRONMENTAL FACTORS	EFFECTS				(Blacked out cells require a check in at least one of the other columns COMMENTS
	Adverse	Benefit	None	Not Applicable	
Community & Residential					*Factor Sheet completed – See page 76.*
No Action, Alternative 1a – TSM, Alternative 2b – One-way Pair	X				Comments received from residents living along US 12 in Fort Atkinson have indicated a problem getting out of their driveways. The No Action and through-city alternatives would not address this existing problem and as traffic increases, these problems can be expected to increase.
Alternative 3 – Rock County N	X				Residents along Rock County N would be affected due to widening of the roadway right-of-way.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X	X			Comments received from residents living along US 12 in Fort Atkinson have indicated a problem getting out of their driveways. Alternative 7 can be expected to address this existing problem, at least in the short term. Some residences would need to be relocated.
Economic Development & Business					*Factor Sheet completed – See page 92.*
No Action, Alternative 1a – TSM Alternative 2b – One-way Pair	X				The City of Fort Atkinson, the Fort Atkinson Industrial Development Corporation and Chamber of Commerce have indicated that the congestion, safety and perception of their downtown are affected by the regional traffic. A restaurant would need to be acquired with Alternative 2b.
Alternative 3 – Rock County N	X				Alternative 3 is not expected to greatly reduce the regional traffic in downtown Fort Atkinson. Access to Fort Atkinson's business park will not be addressed.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X	X			The City of Fort Atkinson has indicated that the congestion, safety and perception of their downtown are affected by the regional traffic. The Fort Atkinson Industrial Development Corporation and Chamber of Commerce have also indicated via Resolution that a bypass would have a positive impact on their ability to bring business to the downtown area and provide easy access to their business park. Farming business would be negatively impacted by Alternatives 7 and 7a if agricultural lands are converted to roadway use. Some farms would lose buildings as well as land, some farms would be severed. A restaurant would need to be acquired with Alternatives 7 and 7a.
Agriculture					*Factor Sheet completed – See page 99.*
No Action, Alternative 1a – TSM, Alternative 2b – One-way Pair	X	X			The roadway alignment would remain the same and no right-of-way would be acquired that would take agricultural lands. As congestion increases on US 12, safe farm access would continue to degrade.

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	Not Applicable	(Blacked out cells require a check in at least one of the other columns COMMENTS
Alternative 3 – Rock County N	X				Impacts to agriculture would occur including access changes, and conversion of agricultural lands.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				Impacts to agriculture would occur including access changes, conversion of agricultural lands and severance of farms.
Environmental Justice					*Factor Sheet completed – See page 108.*
All Alternatives			X		There are potential populations of concern including low income, minority, and disabled at two mobile home parks and one Community Based Residential Facility. No populations of concern at these locations were identified that would receive disproportionately high or adverse impacts as a result of any of the alternatives. See page 108 for a discussion of public involvement with populations of concern.
NATURAL ENVIRONMENT FACTORS					
Wetlands					*Factor Sheet completed – See page 113.*
No Action, Alternative 1a – TSM			X		There would be no impacts to wetlands because the roadway alignment would remain the same and no right-of-way would be acquired that would take wetlands.
Alternative 2b – One-way Pair	X				Alternative 2b would require less than 2 acres of wetland for the widening of US 12 at the southern end of the project corridor.
Alternative 3 – Rock County N	X				Alternative 3 would require 2 acres or less of wetland due to widening on existing roadway.
Alternative 7 – South Bypass	X				Alternative 7 would require up to 12 acres of wetland along the new bypass.
Alternative 7a – Far South Bypass	X				Alternative 7a would require up to 2 acres of wetland due to widening on existing mainline.
Streams & Floodplains					*Factor Sheet completed – See page 122.*
No Action, Alternative 1a – TSM,				X	The roadway alignment would remain the same and no right-of-way would be acquired that would require construction within streams and floodplains and so there would be no impacts.
Alternative 2b – One-way Pair	X				This alternative may impact Galloway Creek which is crossed by existing US 12.

ENVIRONMENTAL FACTORS	EFFECTS				(Blacked out cells require a check in at least one of the other columns COMMENTS
	Adverse	Benefit	None	Not Applicable	
Alternative 3 – Rock County N			X		No impacts to streams or floodplains are expected with this alternative.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				These alternatives both cross Allen Creek and Galloway Creek.
Lakes or Other Open Water					*No Factor Sheet completed*
All alternatives				X	The roadway alignments for each alternative would not require any construction within lakes or other open water and so there would be no direct impacts.
Upland Habitat					*Factor Sheet completed – See page 127.*
No Action, Alternative 1a – TSM, Alternative 3 – Rock County N.				X	The roadway alignment would remain the same and no right-of-way would be acquired that would require any construction within upland habitat and so there would be no impacts.
Alternative 2b – One-way Pair	X				Alternative 2b would require up to 11 acres of woodland habitat.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				Impacts to upland habitat would occur to accommodate new right-of-way for Alternatives 7 and 7a. 19 acres of woodland are within the study corridor for Alternative 7 and 23 acres for Alternative 7a.
Geology					*No Factor Sheet completed.*
No Action, Alternative 1a - TSM			X		No geologic impacts are expected since there would be no construction.
Alternative 2b – One-way Pair, Alternative 3 – Rock County N	X				Karst features may be encountered during construction, particularly during any rock cut splitting, rock blasting, rock excavation, and grading. Karst features may require special treatment due to geotechnical, drainage or environmental concerns. Alternatives 2b and 3 are located generally on the existing US 12 and CTH N alignments, respectively; therefore, the potential for encountering Karst conditions such as sinkholes and springs during construction is relatively low because the roadbed is generally established.

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	Not Applicable	(Blacked out cells require a check in at least one of the other columns COMMENTS
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				These alternatives involve roadway construction on new alignment; therefore, the possibility of encountering Karst conditions during construction of either of these alternatives is higher than it is for Alternatives 2b and 3. Geographic information indicates that springs located near Alternative 7a may form the headwaters of Allen Creek. Cutting or blasting in these areas has the potential to uncover sinkholes or shallow steams and springs.
Erosion					*No Factor Sheet completed.*
No Action			X		Erosion would not be an issue since there would be no construction.
Alternative 1a – TSM and Alternative 2b – One-way Pair	X				These alternatives involve minimal construction. Erosion control at the construction site would be standard. Sediment would be contained within the construction site and erosion would be kept to a minimum.
Alternative 3 – Rock County N	X				Erosion control would be required for construction in areas requiring roadway widening or straightening and flattening. Erosion control at the construction site would be standard. Sediment would be contained within the construction site and erosion would be kept to a minimum.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				Alternatives 7 and 7a would involve new construction. Erosion control measures would be required. Erosion control at the construction site would be standard. Sediment would be contained within the construction site and erosion would be kept to a minimum.
Stormwater management					*No Factor Sheet completed.*
No Action, Alternative 1a – TSM, Alternative 2b – One-way Pair			X		Stormwater management would not change.
Alternative 3 – Rock County N			X		Stormwater management would remain essentially the same. WisDOT would follow the requirements of the DNR cooperative agreement and TRANS 401.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass			X		Stormwater management would be required for new roadways. WisDOT would follow the requirements of the DNR cooperative agreement and TRANS 401.

ENVIRONMENTAL FACTORS	EFFECTS				(Blacked out cells require a check in at least one of the other columns COMMENTS
	Adverse	Benefit	None	Not Applicable	
PHYSICAL ENVIRONMENT FACTORS					
Air Quality					*Factor Sheet completed –See page 131.*
All Alternatives	X				Each alternative is exempt from permit requirements under Wisconsin Administrative Code - Chapter NR 411. No substantial impacts to air quality are expected.
Construction Stage Sound Quality					*Factor Sheet completed – See page 133.*
All alternatives			X		Receptors are located in the area where construction would occur. No receptors are expected to require special noise abatement measures. Depending on the alternative, there are 15 to 86 receptors that will experience an increase in noise levels.
Traffic Noise					*Factor Sheet completed – See page 135.*
All alternatives	X				A noise analysis was performed. Some impacts are anticipated per Wisconsin Administrative Code - Chapter TRANS 405. Depending on the alternative, there are 15 to 86 receptors that will experience an increase in noise levels.
Groundwater and geology					*No Factor Sheet completed*
Alternatives 2b, 3, 7 and 7a	X				The study area contains “karst” geological formations or subsurface limestone cavities that carry groundwater. These formations can be easily contaminated and affect groundwater quality, which may in turn impact area wetlands. The formations themselves could be damaged if not protected from physical disturbance or from road salt contamination. Construction design would need to incorporate appropriate measures to avoid or protect karst formations to avoid the collapse of roadways and to protect the groundwater from contamination.
Hazardous Substances or UST's					*Factor Sheet completed – See page 146.*
No Action, Alternative 1a – TSM				X	No excavation would be required and no right-of-way purchased and so no effect is anticipated regarding hazardous substances.
Alternative 2b – One-way Pair, Alternative 3 – Rock County N, Alternative 7, Alternative 7a	X	X			Phase I screening assessments of hazardous materials indicate that some contaminated sites were located within each study corridor. Prior to purchasing right-of-way for this project, contaminated sites would be remediated. Remediation of sites would be positive, but it would be an added project expense.

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	Not Applicable	(Blacked out cells require a check in at least one of the other columns COMMENTS
CULTURAL ENVIRONMENT FACTORS					
Section 4(f) and 6(f)					*No Factor Sheet completed*
All Alternatives				X	None of the alternatives would require the use of publicly owned land of a public park, recreation area, or wildlife/waterfowl refuge or land of a historic site of National, State, or local significance and so there would be no Section 4(f) use. (23 CFR 771.135(a)(1)). None of the alternatives would require the use of property acquired or developed with LAWCON funds and so there would be no 6(f) impacts. (Section 6(f)(3) of the Land and Water Conservation Fund Act of 1965 (LAWCON)).
Historic Resources					*Factor Sheet completed - See page 149.*
No Action, Alternative 1a – TSM, Alternative 2b – One-way Pair	X				The existing highway runs through two historic districts.
Alternative 3 – Rock County N				X	Three historic potentially-eligible properties were identified on CTH N. Traffic would only increase slightly. Direct impacts could be avoided through design.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass				X	No historic properties were identified along Alternatives 7 or 7a.
Archaeological Resources					*Factor Sheet completed – See page 157.*
No Action, Alternative 1a – TSM				X	No impacts to archaeological resources are anticipated.
Alternative 2b – One-way Pair, Alternative 3 – Rock County N, Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				Preliminary studies show historic and pre-historic archaeological sites. Determinations of Eligibility will be completed for the preferred alternative and will be included in the FEIS. The potential for adverse effects is present, although not yet determined fully.
Aesthetics					*Factor Sheet completed – See page 161.*
No Action, Alternative 1a – TSM			X		There would be no substantial physical changes that would alter the aesthetics of the surrounding area.

ENVIRONMENTAL FACTORS	EFFECTS				(Blacked out cells require a check in at least one of the other columns COMMENTS
	Adverse	Benefit	None	Not Applicable	
Alternative 2b – One-way Pair			X		Aside from a change in views for travelers due to the one-way direction, there would be no physical changes to the highway facility and so aesthetics would not be an issue. Continued increases in congestion can be expected to impact the central business district, with added traffic congestion.
Alternative 3 – Rock County N			X		For Alternative 3, there would be no physical changes to the highway facility except where it approaches the interchange at the western end at WIS 26. This interchange would be constructed as part of another project.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X				Alternatives 7 and 7a would create a new highway facility where one does not currently exist. Views would be impacted as described in the Factor Sheet
Coastal Zone					*No Factor Sheet completed*
All Alternatives				X	The project is not in a coastal zone.
Other – Secondary Impacts					*Secondary and Cumulative Impact Study completed. See Appendix D. Also see Environmental Issues question 1 on page 56.*
No Action, Alternative 1a – TSM	X	X			Not likely to induce substantial land development pattern changes.
Alternative 2b – One-way Pair	X	X			Not likely to induce substantial land development pattern changes.
Alternative 3 – Rock County N	X	X			Not likely to induce substantial land development pattern changes.
Alternative 7 – South Bypass	X	X			New interchanges will create the potential for new land development. A bypass may improve the economy by creating better access to employment and increased efficiencies in hauling goods. An improved economy may increase demand for other land uses creating potential beneficial and adverse effects of new development.
Alternative 7a – Far South Bypass	X	X			New interchanges will create the potential for new land development. A bypass may improve the economy by creating better access to employment and increased efficiencies in hauling goods. An improved economy may increase demand for other land uses creating potential beneficial and adverse effects of new development.

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	Not Applicable	(Blacked out cells require a check in at least one of the other columns COMMENTS
EIS SPECIFIC FACTORS (Complete the following portion for all projects.)					
Long vs. Short Term Effects					*No factor sheets. This item is discussed in its entirety below.*
No Action	X				In the short term, traffic congestion is high, but not at an unmanageable level. In the long-term, the congestion is expected to increase to an unacceptable level for a connector route, reaching LOS D by 2030. This could affect the state and local economy as described in the General Economic and Economic Development & Business Factor Sheets.
Alternative 1a – TSM	X				In the short-term the TSM measures would alleviate some of the problems with traffic flow and congestion. But, the level of service would reach D by 2030 along Main Street and Whitewater Avenue in Fort Atkinson.
Alternative 2b – One way Pair	X	X			In the short and long-term a one-way pair may alleviate some traffic flow and congestion problems. By 2030 the LOS would be C in Fort Atkinson. At the same time, the solution favors the regional traffic movement on US 12 at the expense of local traffic movement.
Alternative 3 – Rock County N	X				In the long term, Alternative 3 may not effectively address the needs of a Connector Route as defined by the State's Highway Plans. Re-signing Rock County N to US 12 is not expected to change many drivers travel patterns. The impacts of purchasing additional right-of-way for this roadway to meet the standards for a Connector Route and the resulting losses to residents and farmers along the corridor may not be justified if traffic patterns would not change.
Alternative 7 – South Bypass, Alternative 7a – Far South Bypass	X	X			In the short-term, the bypass alternatives provide higher cost solutions to the identified problems. The solution would also provide operational effectiveness for the regional system for a longer term than the other alternatives.
Irretrievable Commitments of Resources					*No factor sheets. This item is discussed in its entirety below.*
No Action, Alternative 1a – TSM Alternative 2b – One-way Pair	X				The through-city alternatives would not require much of a commitment in construction resources, but in the long-term the fuel efficiency that is lost to congestion and slower traffic would increase.
Alternative 3 – Rock County N	X				Road building resources would be committed for those areas where the roadway would be straightened or flattened. Fuel for construction equipment would be expended.

ENVIRONMENTAL FACTORS	EFFECTS				
	Adverse	Benefit	None	Not Applicable	(Blacked out cells require a check in at least one of the other columns COMMENTS
Alternative 7 – South Bypass Alternative 7a – Far South Bypass	X				These bypass alternatives have the greatest commitment of construction resources. They also would expend the most fuel for construction equipment.